# SERVICE MANUAL SR620/SR620L SR520/SR520L

marantz®

## model SR620/SR620L/SR520/SR520L

## *Stereophonic Receiver*

## MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If, for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

### ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order froms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the cost of the parts and shipping.

### OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

U.S.A.

**MARANTZ COMPANY, INC.**
National Service Dept.
P.O. Box 577
Chatsworth, CA 91311
U.S.A.

CANADA

**SUPERSCOPE CANADA, LTD.**
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

AUSTRALIA

**MARANTZ AUSTRALIA**
32 Cross Street
Brookvale, NSW 2100
Australia

JAPAN

**MARANTZ JAPAN, INC.**
3622 Kamitsuruma
Sagamihara-shi
Kanagawa, Japan

EUROPE

**MARANTZ S.A.**
326 Avenue Louise Bte 32
1050 Brussels
Belgium

**MARANTZ AUDIO U.K. LTD.**
Unit 15/16
Saxon Way Industrial Estate
Motor Lane
Harmondsworth UB7 OLW
Great Britain

**MARANTZ BELGIUM**
45 Rue Auguste Van Zande
1080 Brussels
Belgium

**MARANTZ SVENSKA A.B.**
Svartviksvangen 56
Traneberg
Box 12016
161 12 BROMMA
SWEDEN

**MARANTZ GERMANY GMBH**
Max-Planckstrasse 22
6072 Dreieich 1
West Germany

**MARANTZ FRANCE**
4 Rue Bernard Palissy
92600 Asnieres
France

**MARANTZ GMBH AUSTRIA**
Wiedner Hauptstrasse 98
1050 WIEN
AUSTRIA

**MARANTZ NORSKE A.S.**
Refstadalleen 13
Oslo 5
Norway

**MARANTZ DENMARK**
Bregnerødvej 132b
3460 BIRKERØD
DENMARK

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

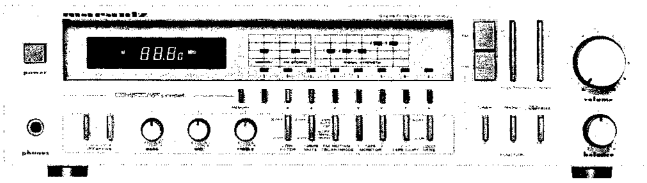
marantz®

# TABLE OF CONTENTS

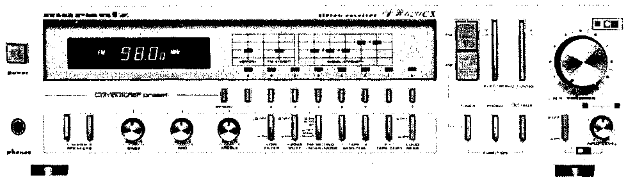
Section Page

INTRODUCTION ... 1
1. SHOCK FIRE HAZARD SERVICE TEST ... 1
2. P.W. BOARDS ... 1
3. TEST EQUIPMENT REQUIRED FOR SERVICING ... 2
4. TUNER ALIGNMENT PROCEDURES ... 2
  4.1 FM Alignment Procedures ... 2
  4.2 Multiplex Alignment Procedures ... 3
  4.3 AM Alignment Procedures ... 3
5. ALIGNMENT POINT ... 5
6. CX CIRCUIT ALIGNMENT AND MEASUREMENT PROCEDURE ... 5
7. VOLTAGE CONVERSION ... 6
8. CIRCUIT DESCRIPTION ... 6
9. BLOCK DIAGRAM ... 20
10. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS ... 23
  10.1 U-COM Assembly (P501) Schematic Diagram and Component Location ... 23
  10.2 Scan Step Assembly (P504) Schematic Diagram and Component Location (SR620/SR520) ... 23
  10.3 Display Assembly (P502) Schematic Diagram and Component Location ... 24
  10.4 Key Switch Assembly (P503) Schematic Diagram and Component Location ... 24
  10.5 Tuner/Phono Assembly (P100) Schematic Diagram and Component Location (SR620/SR620L) ... 26
  10.6 Speaker Switch Headphone Assembly (PT00) Schematic Diagram and Component Location (SR620/SR620L) . 26
  10.7 Speaker Terminal Assembly (PW00) Schematic Diagram and Component Location (SR620/SR620L) ... 27
  10.8 Power Switch Assembly (PU00) Schematic Diagram and Component Location (SR620/SR620L) ... 28
  10.9 Volume/Balance Assembly (PG00) Schematic Diagram and Component Location (SR620/SR620L) ... 29
  10.10 Tape 2 Monitor Assembly (PV00) Schematic Diagram and Component Location (SR620/SR620L) ... 29
  10.11 Tone Amp. Assembly (PE00) Schematic Diagram and Component Location (SR620/SR620L) ... 30
  10.12 DE-Emphasis Switch Assembly (PC50) Schematic Diagram and Component Location (SR620 ONLY) ... 30
  10.13 Main/Power Supply Assembly (P700) Schematic Diagram and Component Location (SR620/SR620L) ... 31
  10.14 CX Control Assembly (PD00) Schematic Diagram and Component Location (SR620 ONLY) ... 32
  10.15 CX Switch Assembly (PD50) Schematic Diagram and Component Location (SR620 ONLY) ... 32
  10.16 CAL. L.E.D. Assembly (PZ00) Schematic Diagram and Component Location (SR620 ONLY) ... 33
  10.17 IND. L.E.D. Assembly (PZ51) Schematic Diagram and Component Location (SR620 ONLY) ... 33
  10.18 Tuner/Phono Assembly (P100) Schematic Diagram and Component Location (SR520/SR520L) ... 34
  10.19 Speaker Switch Headphone Assembly (PT00) Schematic Diagram and Component Location (SR520/SR520L) . 34
  10.20 Speaker Terminal Assembly (PW00) Schematic Diagram and Component Location (SR520/SR520L) ... 35
  10.21 Power Switch Assembly (PU00) Schematic Diagram and Component Location (SR520/SR520L) ... 36
  10.22 Volume/Balance Assembly (PG00) Schematic Diagram and Component Location (SR520/SR520L) ... 37
  10.23 Tone Amp. Assembly (PE00) Schematic Diagram and Component Location (SR520/SR520L) ... 38
  10.24 DE-Emphasis Switch Assembly (PC50) Schematic Diagram and Component Location (SR520 ONLY) ... 38
  10.25 Main/Power Supply Assembly (P700) Schematic Diagram and Component Location (SR520/SR520L) ... 39
11. EXPLODED VIEW AND PARTS LIST ... 40
12. ELECTRICAL PARTS LIST ... 49
13. TECHNICAL SPECIFICATIONS ... 60
14. SCHEMATIC DIAGRAM ... 65

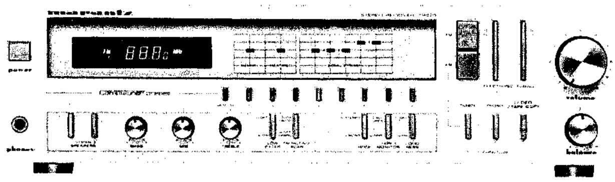
MODEL SR620/SR620L STEREOPHONIC RECEIVER



MODEL SR620CX STEREOPHONIC RECEIVER



MODEL SR520/SR520L STEREOPHONIC RECEIVER



## INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model SR520/SR520L and SR620/SR620L Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the **Receiver.**

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

## 1. SHOCK FIRE HAZARD SERVICE TEST

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verfied before return to user/customer.

Ref. UL Standard NO. 1270. Para. 66. 3. D (Mandatory Test after servicing Electrical Appliances, effective 7-1-83).

## 2. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model SR520/SR520L and SR620/SR620L consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. **Tuner/Phono/Switch . . . .mounted on P.W. Board P100**
2. **Power Supply . . . . . . . . .mounted on P.W. Board P700**
3. **Tone Amp. . . . . . . . . . . .mounted on P.W. Board PE00**
4. **Speaker Switch/**
   **Headphone . . . . . . . . . .mounted on P.W. Board PT00**
5. **Power Switch . . . . . . . . mounted on P.W. Board PU00**
6. **Speaker Terminal . . . . . mounted on P.W. Board PW00**
7. **Balance Control . . . . . . mounted on P.W. Board PG00**
8. **Tape 2 Monitor. . . . . . . mounted on P.W. Board PV00**
   **(SR620/SR620L)**
9. **DE-Emphasis Switch . . . .mounted on P.W. Board PC50**
   **(SR620/SR520(E) SR620(P))**
10. **CX Control . . . . . . . . mounted on P.W. Board PD00**
11. **CX Switch . . . . . . . . . mounted on P.W. Board PD50**
12. **CAL. LED . . . . . . . . . .mounted on P.W. Board PZ00**
13. **Ind. LED . . . . . . . . . . .mounted on P.W. Board PZ51**
    **(SR620(U))**
14. **U-COM . . . . . . . . . . . .mounted on P.W. Board P501**
15. **Display . . . . . . . . . . . .mounted on P.W. Board P502**
16. **Key Switch . . . . . . . . .mounted on P.W. Board P503**
17. **Scan Switch . . . . . . . . .mounted on P.W. Board P504**
    **(SR620/SR520)**

## 3. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model SR620/SR620L/SR520/SR520L Stereophonic Receiver.

| Item | Use |
|---|---|
| AM Signal Generator | Signal source for AM alignment |
| Test Loop | Use with AM Signal Generator |
| FM Signal Generator<br>MPX Signal Generator | Signal source for FM alignment<br>Stereo separation alignment and trouble shooting |
| Distortion Analyzer<br>Audio Oscillator<br>AC VTVM | Distortion measurements<br>Sinewave and squarewave signal source<br>Voltage measurements (AC) |
| Oscilloscope | Waveform analysis and trouble shooting |
| Frequency Counter | MPX Oscillator adjustment (VCO) |
| Circuit Tester | Trouble shooting |
| DC VTVM | Voltage measurements (DC) |
| AC Wattmeter | Monitors primary power to tuner |
| Line Voltmeter | Monitors potential of primary power to tuner |
| Variable Autotransformer | Adjusts level of primary power to tuner |
| DC Didital Voltmeter | Adjust the DC offset of main amplifier output. (SR620/SR620L) |

## 4. TUNER ALIGNMENT PROCEDURES

A dummy resistor of 47 kohms must be connected across the tuner output terminals before alignment.

**4.1 FM Alignment Procedures** (Selector switch in the "FM" position, Mode switch in the MONO Position.)
AUTO/MANU Switch in the "MANU" Position (SR620/SR620L)

1. FM RF Alignment

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Set the Digital Readout Frequency | Adjust: |
|---|---|---|---|---|---|
| 1 | RF generator to FM antenna terminals through matching network (300 ohms, balanced) Maintain RF level below limit. | 98.0 MHz | VTVM to L or R channel output (J110) | 98.0 MHz | FRONT END IFT L8 for maximum output and distortion. |
| 2 | RF generator 1 mV output to FM antenna terminals through matching network. (300 ohms, balanced) | 98.0 MHz | "O" center meter or DC current meter in 100$\mu$A range between (J117 and J118) | 98.0 MHz | L101 core so that the meter indicates its center or may read "O". |
| 3 | RF generator 1 mV output to FM antenna terminals through matching network. (300 ohms, balanced) | 98.0 MHz | Distortion meter to L or R channel output (J110) | 98.0 MHz | L102 core for minimum distortion. |
| 4 | RF generator to 12.5$\mu$V | 98.0 MHz | Distortion meter to L or R Channel Output (J110) | 98.0 MHz | Turn R117 until output is defeated, then re-adjust R117 to the point where output is obtained again. |

### 4.2 Multiplex Alignment Procedures (Selector switch in the "FM" position/Mode switch in the STEREO position)

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Set the Digital Readout Frequency | Adjust: |
|---|---|---|---|---|---|
| 1 | RF generator to FM antenna terminals through matching network. with 1 mV FM stereo signal | 98.0 MHz | Frequency counter to (J119) | 98.0 MHz | R312 so that frequency may precisely read 76 kHz. |
| 2 | RF generator to FM antenna terminals through matching network (300 ohms, balanced) with 1 mV FM stereo signal Modulation level.<br>DIN 40kHz +8% pilot<br>IHF 67.5 kHz +9% pilot | 98.0 MHz | VTVM to R or L channel output (J102) | 98.0 MHz | IFT (A101) for minimum distortion. |
| 3 | RF generator to FM antenna terminals through matching network (300 ohms, balanced) with 1 mV FM stereo signal. | Pilot only | VTVM to right and left channel output (J110) | 98.0 MHz | R309 so that minimum output should be the same in both channels. |
| 4 | RF generator to FM antenna terminals through matching network (300 ohms, balanced) with 1 mV FM stereo signal Modulation level.<br>DIN 40kHz +8% pilot<br>IHF 67.5 kHz +9% pilot | Stereo left (1,000 Hz) | VTVM to right channel output (J110) | 98.0 MHz | R338 for same separation in both channels. |
| 5 | | Stereo right (1,000 Hz) | VTVM to left channel output (J110) | | |
| 6 | Repeat steps 4 and 5. | | | | |

### 4.3 AM Alignment Procedures

1. AM (MW) Local Oscillator Alignment

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Set the Digital Readout Frequency | Adjust: |
|---|---|---|---|---|---|
| 1 | | | DC voltmeter in 3V range to (J102) | 522 kHz | LA01 for 1.5V. |

2. AM (MW) RF Alignment

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Set the Digital Readout Frequency | Adjust: |
|---|---|---|---|---|---|
| 1 | Apply the signal to the AM loop antenna from the RF generator using the test loop. As per the Figure 1. | 1,404 kHz | VTVM to L or R channel output (J102) | 1,404 kHz | CA05-1 for maximum output. |
| 2 | | 603 kHz | | 603 kHz | LA03 for maximum output. |
| 3 | Repeat steps 1 and 2 as necessary to obtain maximum sensitivity. | | | | |

3. AM IF Alignment

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Set the Digital Readout Frequency | Adjust: |
|---|---|---|---|---|---|
| 1 | Sweep generator to (J101 AM Ant) | 450 kHz | Oscilloscope to (J111) | Quiet point on band | LA05 for maximum and symmetric response. |

4. LW Local Oscillator Alignment (Selector switch in the "LW" position) SR620L/SR520L

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Set the Digital Readout Frequency | Adjust: |
|---|---|---|---|---|---|
| 1 | | | DC voltmeter in 12V range to (J102) | 153 kHz | LA02 for 3.0V. |

5. LW RF Alignment (Selector switch in the "LW" position) SR620L/SR520L

| Step | Signal Source Connection | Signal Frequency | Indicator Connection | Set the Digital Readout Frequency | Adjust: |
|---|---|---|---|---|---|
| 1 | Apply the signal to the AM loop antenna from the RF generator using the test loop.<br>As per the Figure 1. | 320 kHz | VTVM to L or R channel output (J102) | 320 kHz | CA05-2 for maximum output. |
| 2 | | 170 kHz | | 170 kHz | LA04 for maximum output. |
| 3 | Repeat steps 1 and 2 as necessary to obtain maximum sensitivity. | | | | |

6. Main Amp. Alignment (Function switch in the "Aux" position)

Connect the digital voltmeter to the Speaker terminals (no-load condition) and adjust R709 (L. ch.) and R710 (R. ch.) for an indication of 0 V. (Volume turned to minimum.)

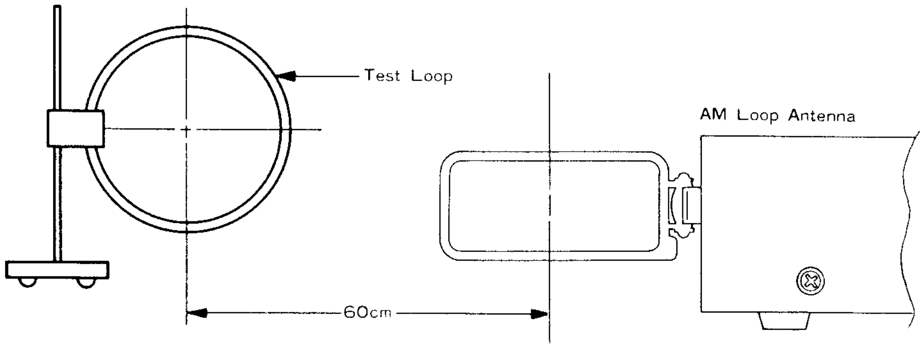
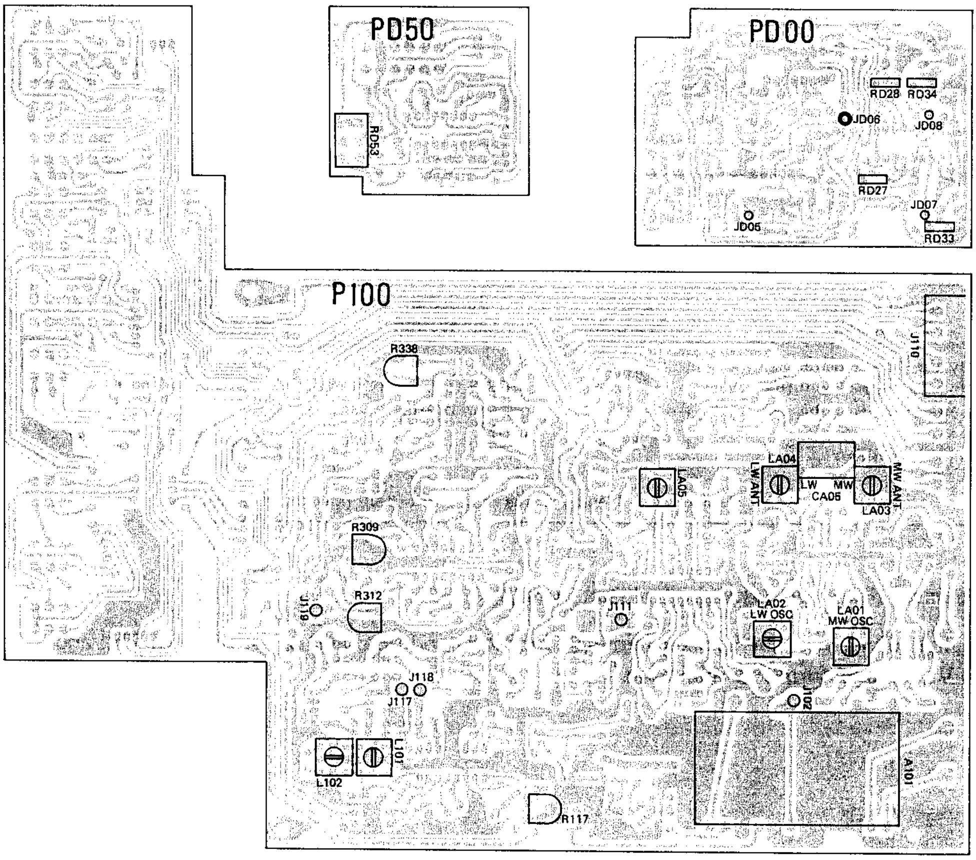


Figure 1. Application of AM Signal

## 5. ALIGNMENT POINTS



## 6. CX CIRCUIT ALIGNMENT AND MEASUREMENT PROCEDURE

### 6.1 Alignment Procedure

(a-1) Output Level Adjustment

1. Set the input VR (RD53) to mechanical center.
2. Apply a 1 kHz sine wave signal to the Phono input (appr. 4 mV).
3. Attenuate the input audio signal generator until both CX CAL indicator LEDs (QZ01, QZ02) are out.
4. Check the DC voltage between test points JD05 (+) and JD06 (GND) at this time. Voltage must be 5 V ±0.5 V.
5. Next, adjust the semi-fixed RD33 (L. ch.) and RD34 (R. ch.) for equal output level at TAPE OUT with the CX switch (SD51) in "on" and "off" positions.

(a-2) DC Offset Adjustment

1. After performing the adjustment described in a-1), adjust the semi-fixed VR RD27 (L. ch.) for a DC voltage reading of 0 V between test points JD07 and JD06, with the CX switch (SD51) in the "on" position.
2. In the seme way, adjust the semi-fixed RD28 (R. ch.) for a DC voltage reading of 0 V between test points JD08 and JD06.
3. Next, check the left channel DC voltage again, and perform re-adjustment if a change has occured.

### 6.2 Measurement Procedure

Measurement of Input Vs. Output Level

1. Apply a 1 kHz sine wave signal to the Phono input and attenuate the input signal until both CX CAL LEDs are out. (Input VR at mechanical center).
2. Assume the TAPE OUTPUT level at this time to be 0dB. Next, attenuate the input signal by 10 dB.
3. Measure the TAPE OUTPUT level at this time, and confirm that it is −20 dB±5 dB.
4. Next, attenuate the input signal to −30 dB (−10 dB + −20 dB total of −30 dB).
5. Measure the TAPE OUTPUT level at this time, and confirm that it is −50 dB±5 dB.

THD Measurement

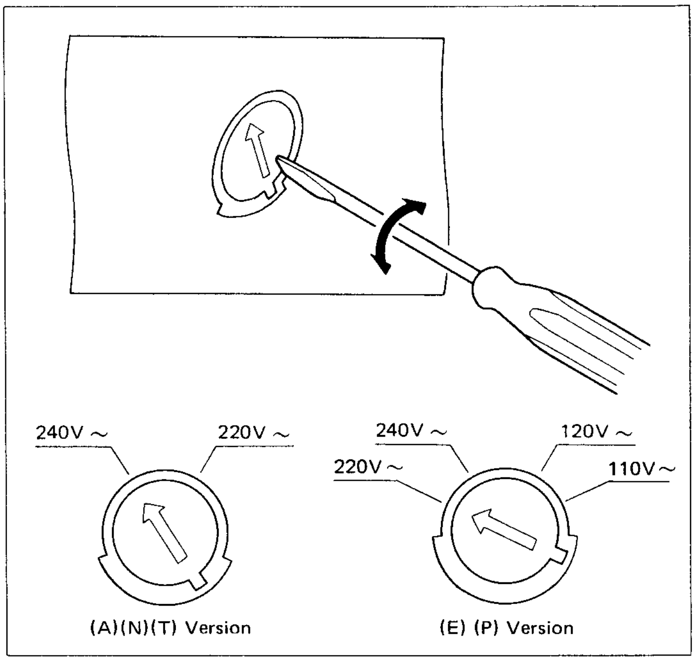
1. Apply a 1 kHz sine wave signal to the Phono input and attenuate the input signal until both CX CAL LEDs are out. (Input VR at mechanical center.)
2. Next, raise the input signal level by 6 dB. At this time, THD at the TAPE OUTPUT must measure 0.5% or less.

## 7. VOLTAGE CONVERSION

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

**CAUTION**
**DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE. DO NOT DISASSEMBLE THE VOLTAGE SELECTOR ABSOLUTELY.**

Voltage Conversion Chart


240V ~
220V ~
240V ~
120V ~
220V ~
110V ~
(A)(N)(T) Version
(E) (P) Version

NOTE ON SAFETY:
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

## 8. CIRCUIT DESCRIPTION

**The Model SR620/SR620L/SR520/SR520L is an LW/MW/FM digital frequency-synthesized tuner using a PLL frequency synthesizer designed for use in LW/MW/FM tuners in conjunction with a CMOS LSI controller.**

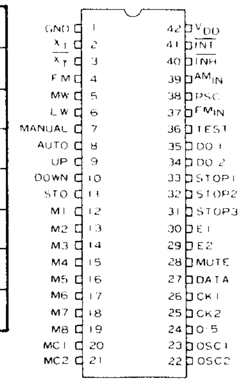
### 8.1 LW/MW/FM Tuner PLL Frequency Synthesizer and Controller TC9147P (Q501)

- **Maximum Ratings (Ta = 25°C)**

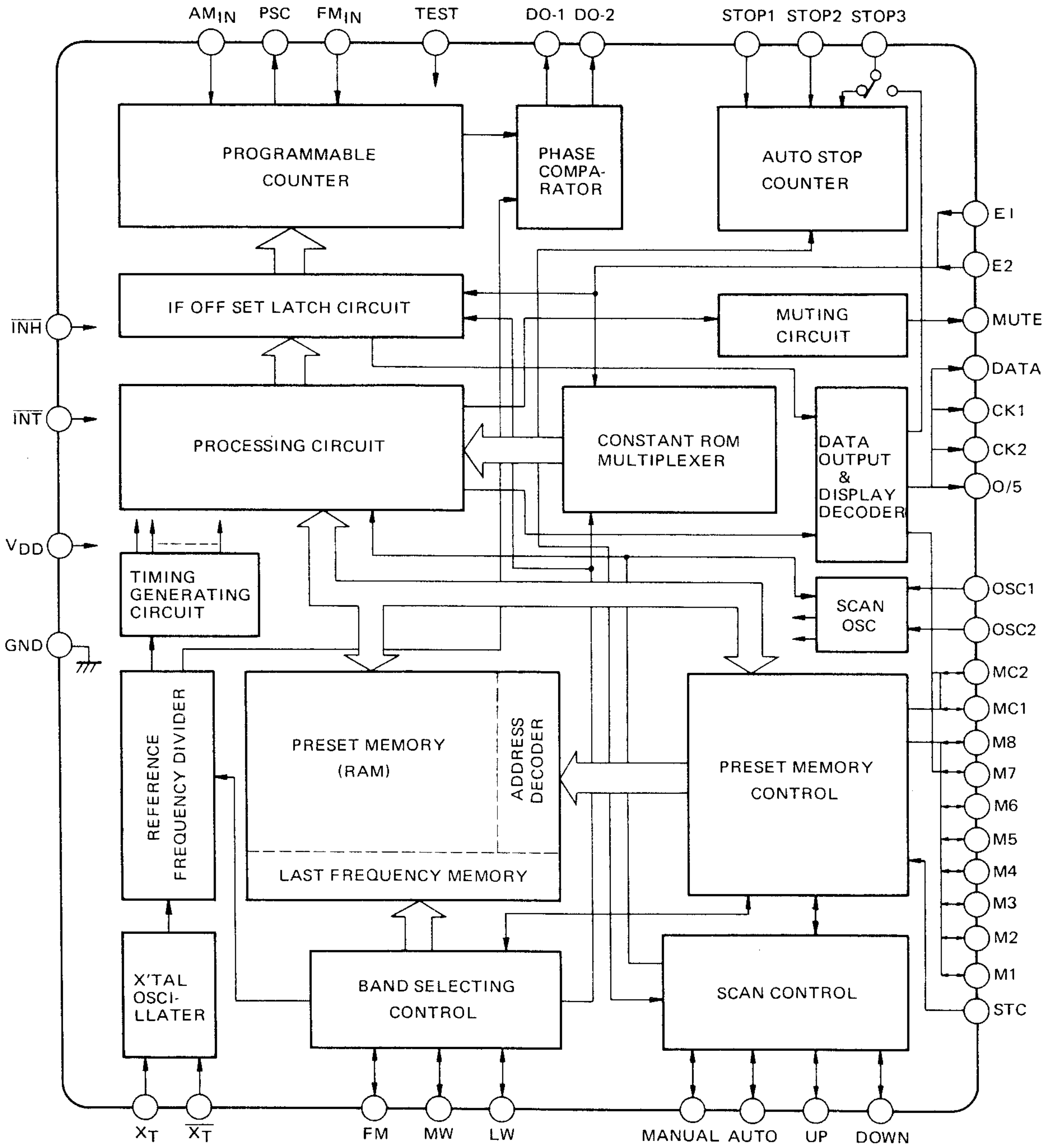
| Characteristic | Symbol | Ratings | Unit |
|---|---|---|---|
| Supply Voltage | $V_{DD}$ | 0 ~ 6 | V |
| Input Voltage | $V_{IN}$ | $-0.3 \sim V_{DD}+0.3$ | V |
| Output Voltage | $V_{OUT}$ | $-0.3 \sim V_{DD}+0.3$ | V |
| Output Current (Note) | $I_{OUT}$ | 30 | mA |
| Power Dissipation | $P_D$ | 800 | mW |
| Operating Temperature | $T_{opr}$ | −30 ~ 75 | °C |
| Storage Temperature | $T_{stg}$ | −55 ~ 125 | °C |

(Note) Bipolar transistor output current.

Pin Connection


GND 1
$X_T$ 2
$\overline{X_T}$ 3
FM 4
MW 5
LW 6
MANUAL 7
AUTO 8
UP 9
DOWN 10
STO 11
M1 12
M2 13
M3 14
M4 15
M5 16
M6 17
M7 18
M8 19
MC1 20
MC2 21
42 $V_{DD}$
41 $\overline{INT}$
40 $\overline{INH}$
39 $AM_{IN}$
38 PSC
37 $FM_{IN}$
36 TEST
35 DO 1
34 DO 2
33 STOP1
32 STOP2
31 STOP3
30 E1
29 E2
28 MUTE
27 DATA
26 CK1
25 CK2
24 0.5
23 OSC1
22 OSC2

- **Block Diagram**


AM$_{IN}$
PSC
FM$_{IN}$
TEST
DO-1
DO-2
STOP1
STOP2
STOP3
PROGRAMMABLE COUNTER
PHASE COMPA-RATOR
AUTO STOP COUNTER
E1
E2
IF OFF SET LATCH CIRCUIT
MUTING CIRCUIT
MUTE
DATA
CK1
CK2
O/5
INH
INT
PROCESSING CIRCUIT
CONSTANT ROM MULTIPLEXER
DATA OUTPUT & DISPLAY DECODER
V$_{DD}$
GND
TIMING GENERATING CIRCUIT
SCAN OSC
OSC1
OSC2
REFERENCE FREQUENCY DIVIDER
PRESET MEMORY (RAM)
ADDRESS DECODER
LAST FREQUENCY MEMORY
PRESET MEMORY CONTROL
MC2
MC1
M8
M7
M6
M5
M4
M3
M2
M1
STC
X'TAL OSCI-LLATER
BAND SELECTING CONTROL
SCAN CONTROL
X$_T$
$\overline{X_T}$
FM
MW
LW
MANUAL
AUTO
UP
DOWN

- **Electrical Characteristics (Unless otherwise specified, Ta = 25°C, $V_{DD}$ = 5.0V)**

| Characteristic | | | Symbol | Test Circuit | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Supply Voltage | | | $V_{DD}$ | | — * | 4.5 | 5.0 | 5.5 | V |
| Supply Current | | | $I_{DD}$ | | FM Band, $f_{IN}$=4MHz, No-Load | — | 4.0 | 7.0 | mA |
| Memory Backup Voltage | | | $V_{DD}$ B | | $\overline{INH}$ = 0V * | 2.0 | ~ | 5.5 | V |
| Inhibit Supply Current | | | $I_{DD}$ $I_1$ | | $V_{DD}$ = 5.0V, $\overline{INH}$=0V | — | — | 15 | μA |
| | | | $I_{DD}$ $I_2$ | | $V_{DD}$ = 2.0V, $\overline{INH}$=0V | — | — | 5 | |
| X'tal Oscillation Frequency | | | $f_X$'tal | | — * | — | 7.2 | — | MHz |
| $FM_{IN}$ | Operating Frequency | | $f_{IN}$ (FM) | | $V_{IN}$ = 0.5 Vp-p, AC coupled * | 2.0 | ~ | 4.0 | MHz |
| | Input Amplitude | | $V_{IN}$ (FM) | | $f_{IN}$ = 2.0 ~ 4.0MHz, AC coupled * | 0.5 | ~ | $V_{DD}$-0.5 | Vp-p |
| $AM_{IN}$ | Operating Frequency | | $f_{IN}$ (AM) | | $V_{IN}$ = 0.5Vp-p, AC coupled * | 0.5 | ~ | 2.2 | MHz |
| | Input Amplitude | | $V_{IN}$ (AM) | | $f_{IN}$ = 0.5 ~ 2.2 MHz, AC coupled * | 0.5 | ~ | $V_{DD}$-0.5 | Vp-p |
| STOP3 ($IF_{IN}$) | Operating Frequency | | $f_{IN}$ (IF) | | $V_{IN}$ = 0.5 Vp-p, AC coupled * | 400 | ~ | 500 | kHz |
| | Input Amplitude | | $V_{IN}$ (IF) | | $f_{IN}$ = 400 ~ 500 kHz, AC coupled * | 0.5 | ~ | $V_{DD}$-0.5 | Vp-p |
| PSC | $FM_{IN}$ Propagation Delay Time | | $t_{pd}$ | | $C_L$ = 15pF, $V_{IN}$ = 0.5 Vp-p | — | — | 200 | nS |
| | Max. Load Capacity | | $C_L$ | | — * | — | — | 15 | pF |
| $\overline{INH}$<br>$\overline{INT}$ | Input Voltage | "H" Level | $V_{IH1}$ | | — | 4.2 | ~ | $V_{DD}$ | V |
| | | "L" Level | $V_{IL1}$ | | — | 0 | ~ | 3.0 | |
| Other All Input I/O Terminals | Input Voltage | "H" Level | $V_{IH2}$ | | — | 3.5 | ~ | $V_{DD}$ | V |
| | | "L" Level | $V_{IL2}$ | | — | 0 | ~ | 1.5 | |
| UP, DOWN, TEST Input Pull-Down Resistance | | | $R_{IN}$ | | — | 15 | 30 | 60 | kΩ |
| $FM_{IN}$, $AM_{IN}$, STOP3 Feedback Resistance | | | $R_f$ | | — | 200 | 400 | 800 | kΩ |
| F1, 2, STOP1, 2, $\overline{INH}$ $\overline{INT}$ Input Leak Current | | | $I_L$ | | — | — | — | 1.0 | μA |

FM, MW, LW, MANUAL, AUTO, STO (TC9147P: M1 ~ M8)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Output Current | "H" Level | $I_{OH}$ | | $V_{OH}$ = 4.0V | 15 | 20 | — | mA |
| | "L" Level | $I_{OL}$ | | $V_{OL}$ = 5.0V | 70 | 140 | 280 | μA |

OSC, MUTE (TC9147P: DATA, CK1, 2, O/5)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Output Current | "H" Level | $I_{OH}$ | | $V_{OH}$ = 4.0V | 0.6 | 1.0 | — | mA |
| | "L" Level | $I_{OL}$ | | $V_{OL}$ = 1.0V | 0.6 | 1.0 | — | mA |

DO-1, DO-2

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Output Current | "H" Level | $I_{OH}$ | | $V_{OH}$ = 4.0V | 0.6 | 1.0 | — | mA |
| | "L" Level | $I_{OL}$ | | $V_{OL}$ = 1.0V | 0.6 | 1.0 | — | |
| Try state Leak Current | | $I_{TL}$ | | — | — | — | 0.1 | μA |

MC1, MC2

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Output Current | "H" Level | $I_{OH}$ | | $V_{OH}$ = 4.0V | 0.6 | 1.0 | — | mA |
| | "L" Level | $I_{OL}$ | | $V_{OL}$ = 5.0V | 70 | 140 | 280 | μA |

Note: Parameters with * mark are guaranteed at all conditions of $V_{DD}$ = 4.5 ~ 5.5V, Ta=30 ~ 75°C.

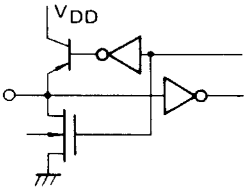
- **Functional Explanation of Terminals**

| Pin No. | Symbol | Terminal Name | Function | Remarks |
|---|---|---|---|---|
| 2 | $X_T$ | Crystal Oscillator terminal | Connect a 7.2 MHz crystal for reference frequency. | With a built in feed-back resistor. |
| 3 | $\overline{X_T}$ | | | |
| 4 | FM | FM band designating input | Mutual reset type for selecting FM/MW/LW bands. | A |
| 5 | MW | MW band designating input | | |
| 6 | LW | LW band designating input | | |
| 7 | MANUAL | Manual tuning mode designating input | Mutual reset type for selecting manual and auto search operating modes at time of UP/DOWN tuning. | A |
| 8 | AUTO | Auto search tuning mode designating input | | |
| 9 | UP | Up operating key input | For UP/DOWN tuning with the push key connected. | B |
| 10 | DOWN | DOWN operating key input | | |
| 11 | STO | Memory store command input | The preset memory is set to write state by this input. | A |
| 12<br>≀<br>19 | M1<br>≀<br>M8 | Preset memory channel designating input | In combination with MC1 and MC2 inputs, controls write/read of the internal 16 channel preset memory. | A |
| 20 | MC1 | Memory control input | Used for setting the 16 channel preset memory either to FM/AM (MW+LW) 8 channel fixed system or FM+MW+LW 3 bands 16 channel random system. | C |
| 21 | MC2 | | | |
| 22 | OSC2 | AM oscillator terminal | C.R terminal for oscillator that decides SCAN speed at time of AM search. | — |
| 23 | OSC1 | FM oscillator terminal | C.R terminal for oscillator that decides SCAN speed at time of FM search. | — |
| 24 | O/5 | FM 50 kHz output for Europe | 50 kHz step output in FM band in European region. Become "H" level at 50 kHz. | D |
| 25 | CK2 | Receiving frequency data serial outputs | Transmits serial data and timing clock to be sent to Receiving Frequency Digital Display Driver TD6301AP. CK1 output also serves for pee sound transmission. | D |
| 26 | CK1 | | | |
| 27 | DATA | | | |
| 28 | MUTE | Muting signal output | This terminal is placed at "H" level at time of muting output. | D |
| 29 | E2 | Region Designating output | For designating Japan, U.S.A. and Europe. | E |
| 30 | E1 | | | |
| 31 | STOP3 | AM-IF signal input | Stops auto search by counting IF450 kHz signal at time of AM. | F |
| 32 | STOP2 | Auto search stop signal input | When a "H" level signal is input under the state where a "H" level signal is being given to STOP1 Input, stops Auto search. | E |
| 33 | STOP1 | SCAN speed slow input | When a "H" level signal is input, reduce auto search scan speed to 1/2. | E |
| 34 | DO-2 | Phase Comparator output | 2 try state buffers are transmitted parallelly from one phase comparator. | G |
| 35 | DO-1 | | | |
| 36 | TEST | Test Terminal | When a "H" level signal is input, this terminal is placed at test mode. | B |
| 37 | $FM_{IN}$ | FM Programmable counter input | Output from prescaler TD6104P is connected. | F |
| 38 | PSC | Prescaler control output | Controls selection of 1/30 and 1/32 division of prescaler TD6104P. | D |

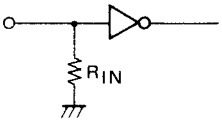
| Pin No. | Symbol | Terminal Name | Function | Remarks |
|---|---|---|---|---|
| 39 | $AM_{IN}$ | AM programmable counter input | AM local oscillation signal is applied. | F |
| 40 | $\overline{INH}$ | Inhibit input | Normal operation at "H" level and inhibit status at "L" level. | E |
| 41 | $\overline{INT}$ | Initialize input | Normal operation at "H" level, and internal state is initialized at "L" level. | E |
| 42 | $V_{DD}$ | Power terminals | Apply 5±0.5V. Backup is possible up to 2V. | — |
| 1 | GND | | | |

- **Input/Output Equivalent Circuit**

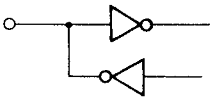
A. Bipolar Transistor LED Driver Built-in I/O.



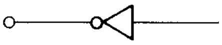
B. C-MOS Input with Pull-Down Resistor



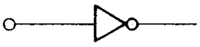
C. C-MOS I/O



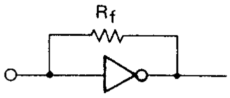
D. C-MOS Output



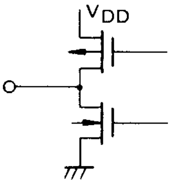
E. C-MOS Input (without Pull-up. Pull-Down Resistor)



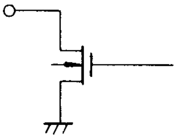
F. With Built-in Input Amplifier



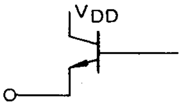
G. Try-state Output



H. Nch MOS LED Driver Output



I. Bipolar Transistor LED Driver Output



## 8.2 OUTLINE OF FUNCTIONS

- **Receiving Bands**

1) FM/MW/LW bands can be received in European region and FM/AM bands in Japan and U.S.A.
2) AM band for U.S.A. is able to receive up to 1710 kHz, and 9 kHz separation is also available.

| Destination | Band Name | Range of Receiving Frequency | IF | Frequency Stop | Reference Frequency | Remarks |
|---|---|---|---|---|---|---|
| Europe | FM | 37.50 ~ 108.00 MHz | +10.7 MHz | 50 kHz | 25 kHz | FM Europe 50 kHz separation |
|  | MW | 522 ~ 1611 MHz | +450 kHz | 9 kHz | 9 kHz | MW 9 kHz separation |
|  | LW | 153 ~ 360 kHz | +450 kHz | 1 kHz | 1 kHz | 1 kHz separation |
| U.S.A. | FM | 87.5 ~ 108.0 MHz | +10.7 MHz | 100 kHz | 25 kHz | FM U.S.A. band |
|  | AM-1 | 520 ~ 1710 kHz | +450 kHz | 10 kHz | 10 kHz | MW U.S.A. 10 kHz separation |
|  | AM-2 | 522 ~ 1710 kHz | +450 kHz | 9 kHz | 9 kHz | MW U.S.A. 9 kHz separation |
| Japan | FM | 76.0 ~ 90.0 MHz | −10.7 MHz | 100 kHz | 25 kHz | FM JAPAN band |
|  | AM | 522 ~ 1611 kHz | +450 kHz | 9 kHz | 9 kHz | MW 9 kHz separation |

## 8.3 EXPLANATION OF OPERATION

- **PLL Unit**

### 1. Reference Frequency and Crystal Oscillator

Oscillation frequency from the crystal oscillator is divided to generate reference frequency of 25 kHz at time of FM, 9 or 10 kHz at MW and 1 kHz at LW.

- Crystal oscillation frequency is 7.2 MHz.
- The crystal oscillator has a built-in self-bias amplifier and can be composed easily only by connecting a crystal and a capacitor. Further, oscillation is stopped under the inhibit state.

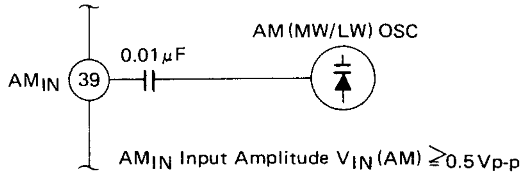
| Mode | Reference Frequency | Remarks |
|---|---|---|
| FM | 25 kHz | at FM band |
| MW9 | 9 kHz | at MW 9 kHz separation |
| MW10 | 10 kHz | at MW 10 kHz separation |
| LW | 1 kHz | at LW band |

### 2. Programmable Counter

The programmable counters for FM and AM (MW/LW) are in different circuit configuration.

1) FM Programmable Counter
The FM programmable counter is of swallow count type in combination with TD6104P. As a result, reference frequency 25 kHz is obtained and performance is improved.
In this case, the transmission delay time of PSC output for controlling TD6104P is limited. PSC transmission delay time $td < 250$ ns.

2) AM Programmable Counter
The AM (MW/LW) programmable counter is of direct division type.
The signal transmitted from AM channel can be directly input to $AM_{IN}$ terminal.

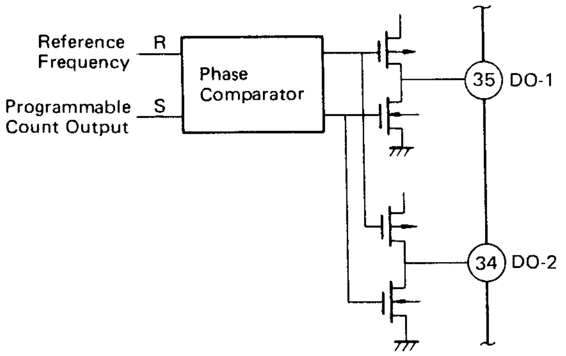

AM (MW/LW) OSC
0.01μF
AM_IN
39
AM_IN Input Amplitude V_IN (AM) ≧0.5Vp-p

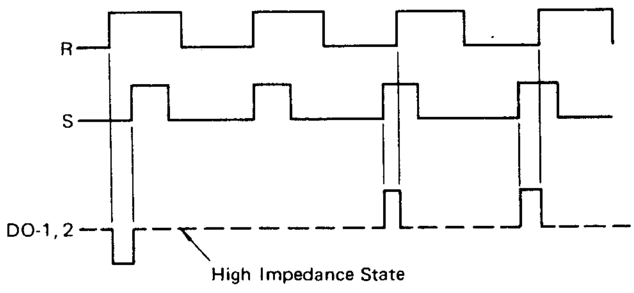
- As both $FM_{IN}$ and $AM_{IN}$ have a built-in input amplifier, a signal shall be applied with a capaciter connected.
- Under the inhibit state and at AM (MW/LW), PSC output is fixed at "L" level.
- IF offset has been provided in advance for frequency division by the programmable counter.

### 3. Phase Comparator

The phase comparator is a unit that compares phases of reference frequency and programmable counter output and controls $V_{CO}$ through the low pass filter so that thus two signal frequencies and phases agree each other.

- Two tri-state buffers DO-1 and DO-2 are transmitted parallely from one phase comparator. Because of this, two sets of low-pass filter can be used without necessity for switching them.
- Under the inhibit state, both DO-1 and DO-2 outputs are kept at "L" level.


Reference Frequency
R
Programmable Count Output
S
Phase Comparator
35
DO-1
34
DO-2


R
S
DO-1, 2
High Impedance State

DO Output Timing Chart

### ● Control Unit

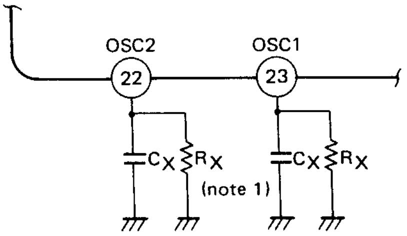
### 1. Determination of OSC1 and OSC2 Oscillation Frequency

OSC1 and OSC2 are C and R connecting terminals of a single terminal type oscillator. Scan speed at time of manual fast forward and auto search is decided by this frequency.

OSC1 is for FM and OSC2 is for AM and oscillation frequency can be set independently. Further, OSC1 oscillation frequency also seves for deciding manual fast forward pushing time, muting signal transmission time and store state automatic releasing time.

Both OSC1 and OSC2 stop oscillation unless it is required.

Oscillation Frequency $F_{OSC} = \frac{1}{0.7\,C_X R_X}$ (Hz) (Note 2)


OSC2
OSC1
22
23
Cx
Rx
Cx
Rx
(note 1)

(Note 1) $R_X = 10k \sim 100k\Omega$

| | | | | |
|---|---|---|---|---|
| Scan Speed (Fast FWD. Auto Search) | At FM | $f_s$ (FM) = 1/2 $f_{OSC1}$ (step/sec) | (One Example)<br>When $f_{OSC}$ = 20 Hz | 10 (step/sec) |
| | At AM (MW/LW) | $f_s$ (AM) = 1/2 $f_{OSC2}$ (step/sec) | | 10 (step/sec) |
| Manual Fast FWD Push Time | | $T_{SCAN}$ = 14/$f_{OSC1}$ (sec) | | 0.7 (sec) |
| Store State Auto Release Time | | $T_{STO}$ = 224/$f_{OSC1}$ (sec) | | 11 (sec) |
| Muting Signal Output Time | Short | $T_{MUTE}$ (S) = 7/$f_{OSC1}$ (sec) | | 0.35 (sec) |
| | Long | $T_{MUTE}$ (L) = 15/$f_{OSC1}$ (sec) | | 0.75 (sec) |

(Note) $f_{OSC1}$: OSC1 Oscillation Frequency, $f_{OSC2}$: OSC2 Oscillation Frequency

## 2. Designation of Destination by Japan, U.S.A. and Europe

Regional designation by Japan, U.S.A. and Europe is made by E1 and E2 terminals.

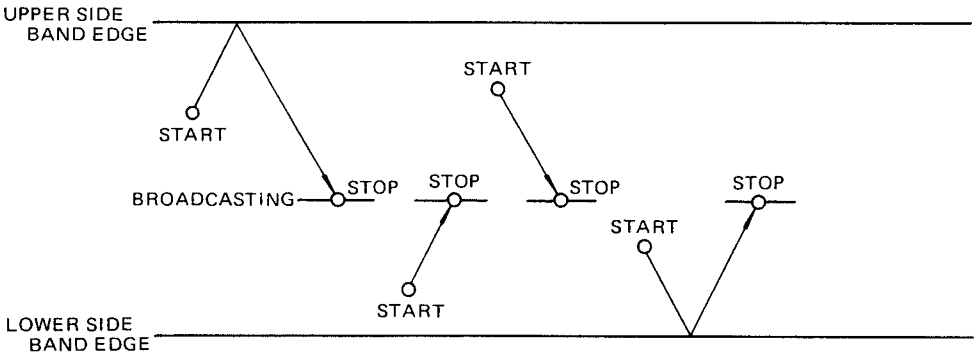
| E1 | E2 | Destination | |
|---|---|---|---|
| 0 | 0 | Japan | |
| 1 | 0 | Europe | |
| 0 | 1 | U.S.A. | MW 9 kHz separation |
| 1 | 1 | | MW 10 kHz separation |

- For U.S.A. region designation, AM (MW) band 9 kHz/10 kHz separation can be selected.

(a) Method of auto stop signal input during normal auto search.
Input the auto stop signal to both STOP1 and STOP2 terminal, or with STOP2 terminal fixed at "H" level, apply the auto stop signal to STOP1 terminal.

(b) When ARI or Stereo Station only is searched.
Apply the normal auto stop signal to STOP1 terminal. Apply ARI or Stereo Station indentification signal to STOP2 terminal ("H" level shows ARI of Stereo Station).

(c) When Auto Stops Signal is received (when there is a broadcasting station), Scan is stopped.
- The auto search tuning scan system is in triangular waveform shape.
- When the $\boxed{\text{DOWN}}$ key is pushed during the scanning in the up direction, the scanning is changed in the down direction. Similarly, when the $\boxed{\text{UP}}$ key is pushed during the scanning in the down direction, the scanning is reversed in the up direction.



- The auto search scan speed is same as the fast forward scan speed $f_s$ (FM) at FM, $f_s$ (AM) at AM (MW/LW).
  The auto search tuning is released when the following operation is mode:
  When the operating mode is changed to the manual scan mode.
  When a receiving band is changed.
  When the preset memory is read.
  When the status is changed to the inhibit state.
- When the $\boxed{\text{UP}}$ or $\boxed{\text{DOWN}}$ key is kept pushed during the auto search tuning, no auto stop signal is accepted. In addition, the band edge is reached, the auto search tuning is stopped.

## 3. Auto Stop

1) STOP1, STOP2 Terminals

- When a "H" level signal is applied to STOP1 input, auto search scan speed is reduced to 1/2 (Slow mode).
- When a "H" level signal is applied to STOP2 terminal under the slow mode (STOP1 = at "H" level), the auto search tuning is stopped.
  Through the above operations, it is possible to stop the auto search after searching ARI or Stereo station only.

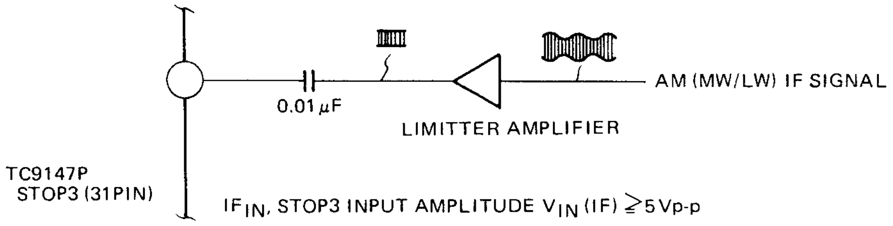
2) STOP3 Terminal

This terminal is the input of IF signal (=450 kHz) at time of AM (MW/LW). When this input frequency enters the specified range against 450 kHz, auto search tuning stops.

- As the input amplifier has been built in, apply IF signal with the capacitor connected.
- $IF_{IN}$, STOP3 input is not accepted at time of FM.
- Range of Auto Tuning stopping.

| | |
|---|---|
| MW Band | 450 kHz ± about 3 kHz |
| LW Band | 450 kHz ± about 600 Hz |

- Since IF signal has been amplitude modulated, it is adequate to apply it to $IF_{IN}$, STOP3 terminal through the limitter amplifier.



## 4. Memory Function

This is the function for tuning a desired channel by one-touch by constantly storing optional frequency data.

The terminals concerned with the memory are STO, M1 ~ M8, MC1, and MC2, a table of 11 terminals. Inputs are all "H" level active.

- STO and M1 ~ M8 terminal are of I/O type with a built-in bipolar transistor status display driver.
- MC1 and MC2 terminals control the built-in 16 channel preset memories as shown in the following table.

| MC1 | MC2 | Allocation of 16 channel preset memories | Memory type |
|---|---|---|---|
| 1 | 0 | Memory addresses for 1 ~ 8 channels are assigned by M1 ~ M8 terminals. | 16 channel random memory system. |
| 0 | 1 | Memory addresses for 9 ~ 16 channels are assigned by M1 ~ M8 terminals. | |
| 1 | 1 | No input is accepted. Memory allocation holds the previous status. | |
| 0 | 0 | Automatically allocated to 8 FM channels and 8 AM channels. Further, at time of AM, MW and LW band random system. | 8 FM/AM channel fixed memory system. |

- MC1 and MC2 Inputs are of mutual resetting I/O type with an internal latch circuit.
  (Note) MC1 and MC2 terminals are of C-MOS I/O type and has no built-in driver.

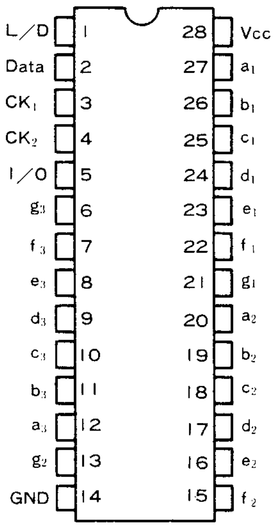
## 5. Receiving Frequency Display

The frequency display of TC9147P is explained here. The linear display of TC9146AP will be separately explained. Receiving frequency is displayed using the external static display driver TC6301AP.

- **Maximum Ratings (Ta = 25°C)**

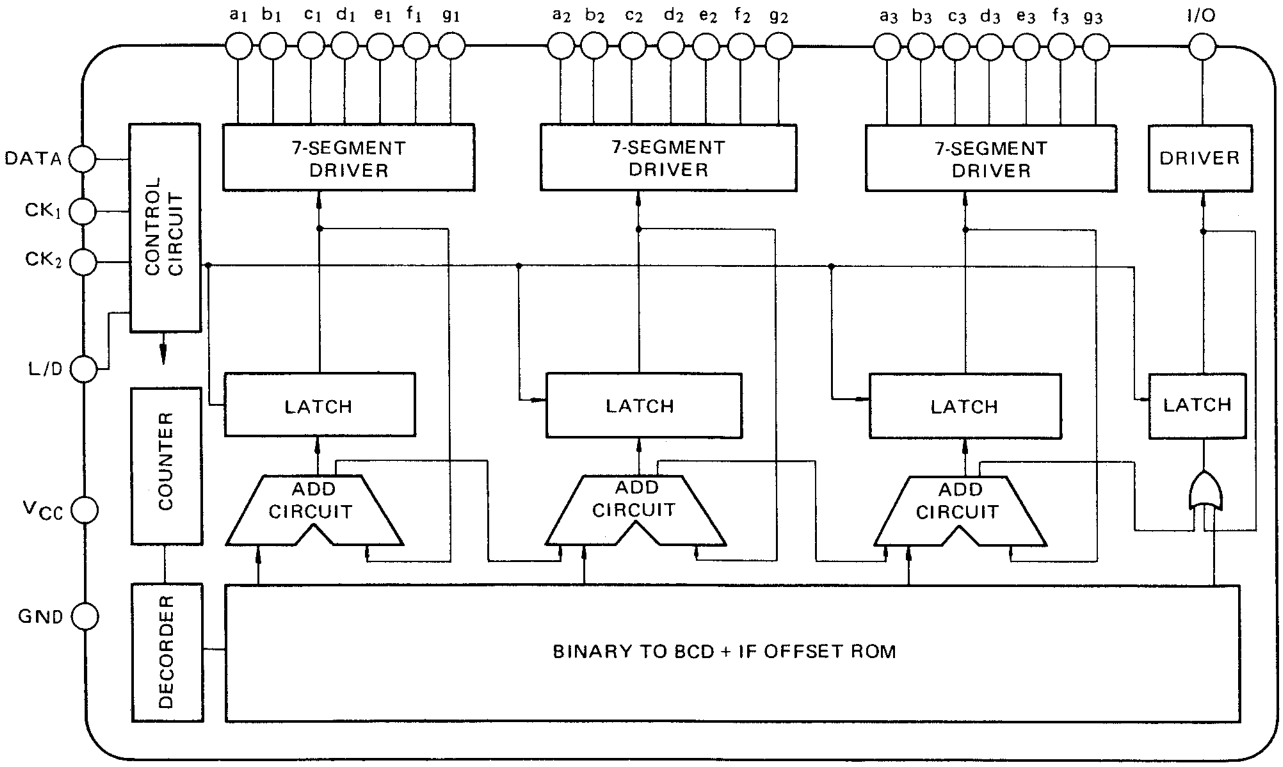
| Characteristic | Symbol | Tating | Unit |
|---|---|---|---|
| Supply Voltage | $V_{CC}$ | 8 | V |
| Input Voltage | $V_{IN}$ | $-0.3 \sim V_{CC}+0.3$ | V |
| Output Current | $I_{OL}$ (MAX) | 20 | mA |
| Output Voltage | $V_{OH}$ (MAX) | 20 | V |
| Power Dissipation | $P_D$ | 1.0 | W |
| Operating Temperature | $T_{opr}$ | $-30 \sim 75$ | °C |
| Storage Temperature | $T_{stg}$ | $-55 \sim 150$ | °C |

Pin Connections


L/D 1
Data 2
CK1 3
CK2 4
I/O 5
g3 6
f3 7
e3 8
d3 9
c3 10
b3 11
a3 12
g2 13
GND 14
28 Vcc
27 a1
26 b1
25 c1
24 d1
23 e1
22 f1
21 g1
20 a2
19 b2
18 c2
17 d2
16 e2
15 f2

Q503

- **Block Diagram**


a1 b1 c1 d1 e1 f1 g1
a2 b2 c2 d2 e2 f2 g2
a3 b3 c3 d3 e3 f3 g3
I/O
DATA
CK1
CK2
L/D
VCC
GND
CONTROL CIRCUIT
COUNTER
DECORDER
7-SEGMENT DRIVER
7-SEGMENT DRIVER
7-SEGMENT DRIVER
DRIVER
LATCH
LATCH
LATCH
LATCH
ADD CIRCUIT
ADD CIRCUIT
ADD CIRCUIT
BINARY TO BCD + IF OFFSET ROM

- **Pin Description**

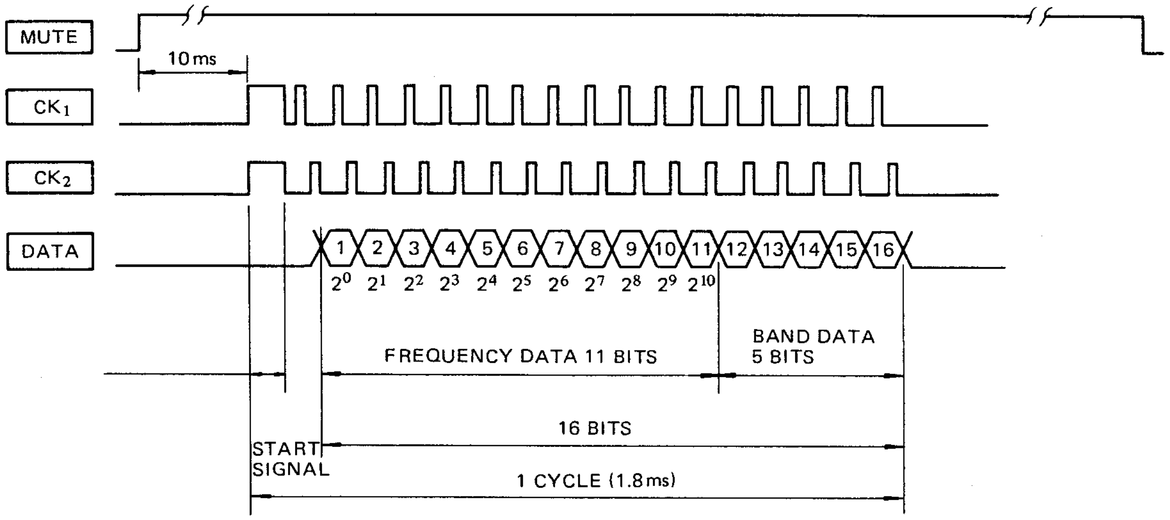
| Pin No. | Name | Functional Description | Remarks |
|---|---|---|---|
| 1 | L/D | Output state switching signal input. Signal input for switching output state by displays (LED, FL and LCD). | |
| 2 | Data | Receiving frequency data signal input. Signal is input in serial from system controller. | |
| 3, 4 | $CK_1$, $CK_2$ | Timing clock signal input. | |
| 5 | 1/0 | Segment drive signal output. For FM the digit of 100 MHz and for AM that of 1000 kHz are displayed respectively. Since both FM and AM are 1 or 0, one pin only is sufficient for output. | With built-intransistors of high resisting voltage and large current flow. |
| 6 ~ 12 | $a_3 \sim g_3$ | 7-segment drive signal output. Digits of 10 MHz for FM and those of 100 kHz for AM are displayed, respectively | With built-intransistors of high resisting voltage and large current flow. |
| 13, 15 ~ 20 | $a_2 \sim g_2$ | 7-segment drive signal output. Digits of 1 MHz for FM and those of 10 kHz for AM and displayed, respectively. | With built-intransistors of high resisting voltage and large current flow. |
| 21 ~ 27 | $a_1 \sim g_1$ | 7-segment drive signal output. Digits of 100 kHz for AM and those of 1 kHz for AM are displayed, respectively. | With built-intransistors of high resisting voltage and large current flow. |
| 14, 28 | $V_{CC}$, GND | Power supply GND. | |

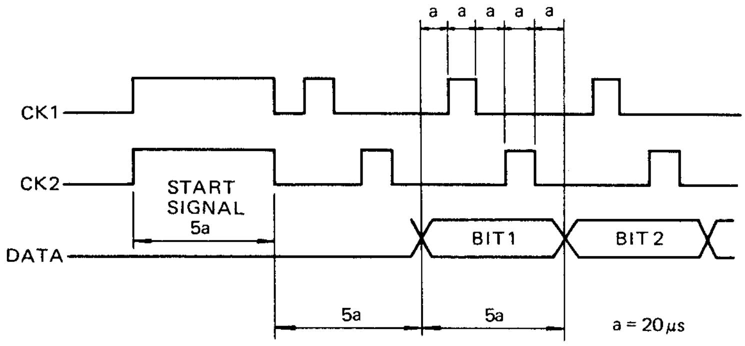
- **Electrical Characteristics (Unless otherwise specified, $V_{CC}$ = 5V, Ta = 25°C)**

| Characteristic | | Symbol | Test Circuit | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|---|
| Operating Supply Voltage Range | | $V_{CC}$ | | Ta = −30 ~ 75°C | 4.5 | 5.0 | 5.5 | V |
| Operating Supply Current | | $I_{CC}$ | | No load | – | – | 16 | mA |
| Input Voltage | "H" Level | $V_{IH}$ | | Data, $CK_1$, $CK_2$, L/D | 4.0 | – | – | V |
| | "L" Level | $V_{IH}$ | | Data, $CK_1$, $CK_2$, L/D | – | – | 1.0 | V |
| Input Current | "H" Level | $I_{IH}$ | | Data, $V_{IH}$ = 5V | – | – | 0.6 | mA |
| | "L" Level | $I_{IL}$ | | Data, $V_{IL}$ = 0V | −0.1 | – | – | mA |
| Output Current | | $I_O$ | | $a_1 \sim g_1$, $a_2 \sim g_2$, $a_3 \sim g_3$, 1/0 | 15 | – | – | mA |
| Output Saturation Voltage | | $V_{CE}$ (sat) | | $a_1 \sim g_1$, $a_2 \sim g_2$, $a_3 \sim g_3$, 1/0, $I_{OL}$ = 15 mA | – | – | 1.2 | V |
| Timing Input Operating Frequency | | $f_{opr}$ | | Data, $CK_1$, $CK_2$ | – | – | 120 | kHz |

Receiving frequency data in serially transfered to TD6301AP through DATA, CK1 and CK2 terminals.

- The Output timings of DATA, CK1 and CK2 terminal are shown in the following diagram.


MUTE
10 ms
CK1
CK2
DATA
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
2⁰ 2¹ 2² 2³ 2⁴ 2⁵ 2⁶ 2⁷ 2⁸ 2⁹ 2¹⁰
FREQUENCY DATA 11 BITS
BAND DATA 5 BITS
16 BITS
START SIGNAL
1 CYCLE (1.8 ms)


a
a
a
a
a
CK1
CK2
DATA
START SIGNAL
5a
BIT1
BIT2
5a
5a
a = 20μs

(1) DATA Output

Frequency data and band data are serially transmitted in 16 bits. 1 ~ 11 bits are frequency data and 12 ~ 16 bits are band data.

- Frequency Data
  This is a value of receiving frequency minus the lower band edge of that band. This value is transmitted in binary 11 bits.
- Band data are as shown in the table.

| bit 12 | 13 | 14 | 15 | 16 | Band |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | LW Band |
| 0 | 1 | 0 | 0 | 0 | FM JAPAN Band |
| 0 | 0 | 1 | 0 | 0 | FM U.S.A./Europe Band |
| 0 | 0 | 0 | 1 | 0 | MW 9 kHz separation |
| 0 | 0 | 0 | 0 | 1 | MW 10 kHz separation |

(2) CK1, CK2 Output

These outputs are timing clocks for reading DATA output by TD6301AP. DATA, CK1 and CK2 outputs are transmitted by are cycle only in the following cases:

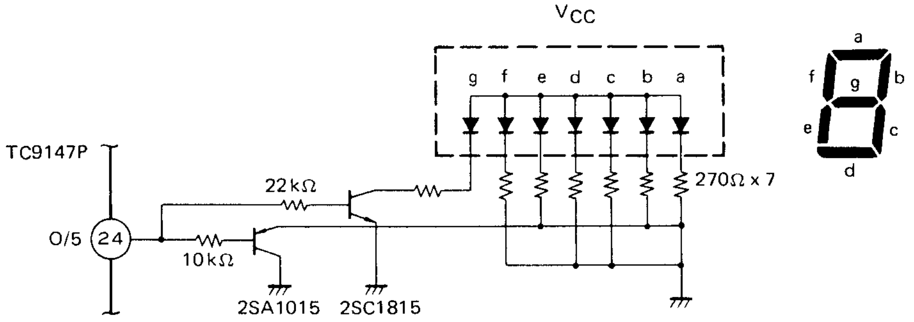
- When the inhibit state is released.
- When a band is changed.
- When the preset memory is read.
- At time of UP/DOWN tuning.

(3) 50 kHz Frequency Display in FM Band for Europe

The 50 kHz display in FM Band for Europe is made at O/5 output.

- At time of 50 kHz, output will become "H" level. When other areas are assigned or at time of MW and LW bands, output is fixed at "L" level.

Example of Display by 7-Segment LED.

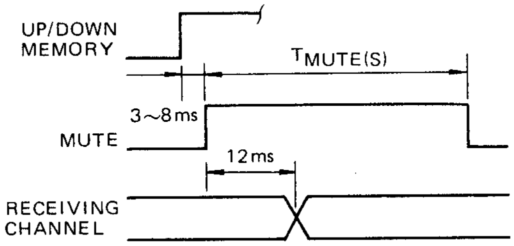

Vcc
g f e d c b a
a
f
g
b
e
c
d
TC9147P
22kΩ
270Ω x 7
O/5
24
10kΩ
2SA1015
2SC1815

## 6. Muting Output

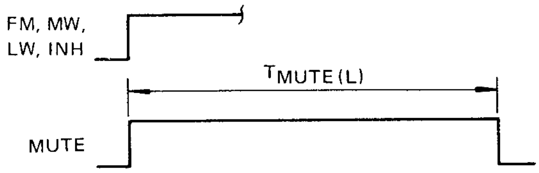
In order to prevent generation of abnormal sound at time of key operation, muting signal is transmitted from the MUTE terminal at the timings shown in the following diagrams.

- Muting output time at time of restoration from the inhibit state or band switching is extended to about 2 times of that in normal cases. (This is also true when a band is changed according to the memory read in the random memory system.)
- When the multiple band input keys are pushed or during the fast forwarding or auto search tuning, muting output is kept at "H" level.
- The receiving channel (division of the programmable counter) changes 12 mS later after muting signal is transmitted. This will provide a margin to muting application time.

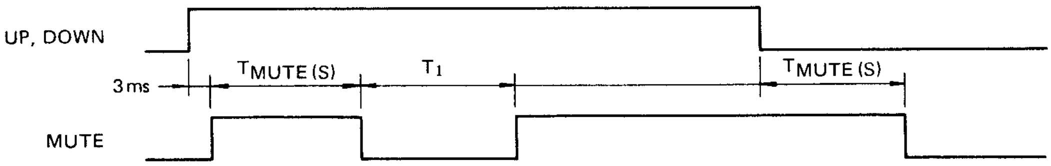
(1) Manual UP/DOWN, Memory Read


UP/DOWN
MEMORY
TMUTE(S)
3~8ms
MUTE
12ms
RECEIVING
CHANNEL

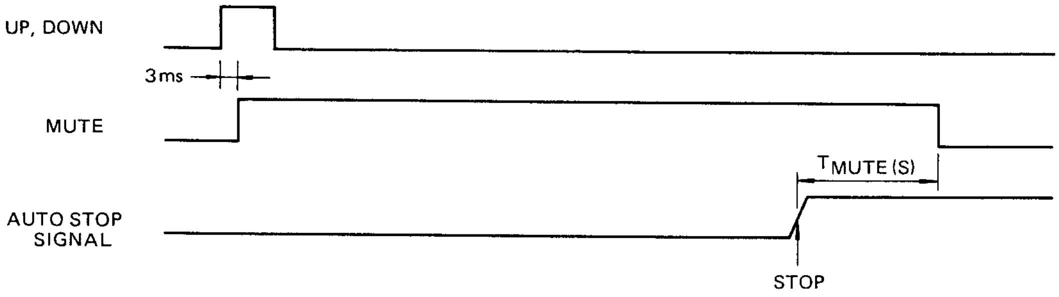
(2) Restoration from Inhibit status, Band Switching


FM, MW,
LW, INH
TMUTE(L)
MUTE

(3) Manual Fast Forward


UP, DOWN
3ms
TMUTE(S)
T1
TMUTE(S)
MUTE

### (4) Auto Search Tuning


UP, DOWN
3ms
MUTE
TMUTE (S)
AUTO STOP SIGNAL
STOP

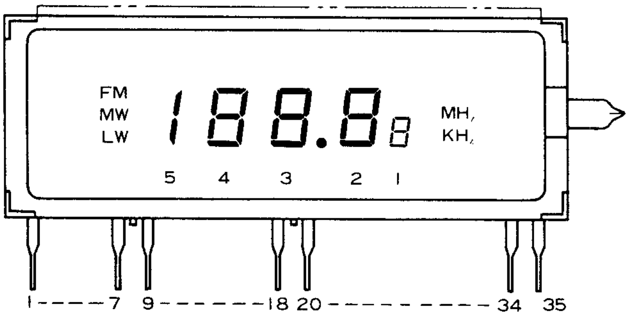
$$T_{MUTE(L)} = \frac{15}{f_{OSC1}} \text{ (sec)} \quad (= 750\,\text{ms})$$

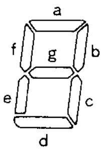
$$T_{MUTE(S)} = T_1 = \frac{7}{f_{OSC1}} \text{ (sec)} \quad (= 350\,\text{ms}) \quad (\text{at } f_{OSC1} = 20\,\text{Hz})$$

- Electrode Connection

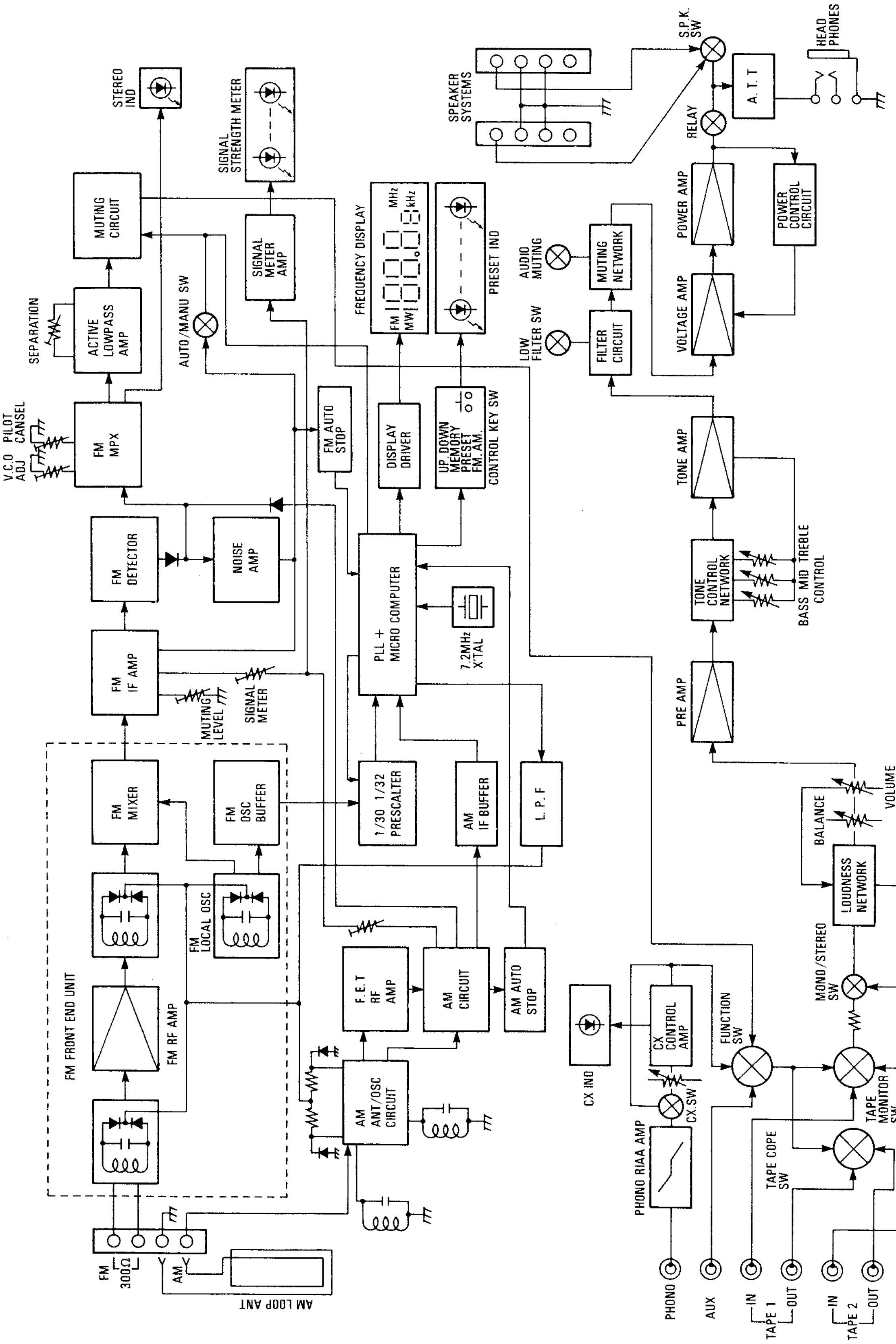
| PIN No. | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Electrode Connection | W/O LW | F | $b_5$<br>$c_5$ | $a_4$ | $f_4$ | $e_4$ | $d_4$ | $c_4$ | IC | $g_4$ | $b_4$ | $a_3$ | $f_3$ | $e_3$ | $d_3$ | $c_3$ | $g_3$ | $b_3$ | $a_2$ |
| | W/ LW | F | $b_5$<br>$c_5$ | $a_4$ | $f_4$ | $e_4$ | $d_4$ | $c_4$ | IC | $g_4$ | $b_4$ | $a_3$ | $f_3$ | $e_3$ | $d_3$ | $c_3$ | $g_3$ | $b_3$ | $a_2$ |

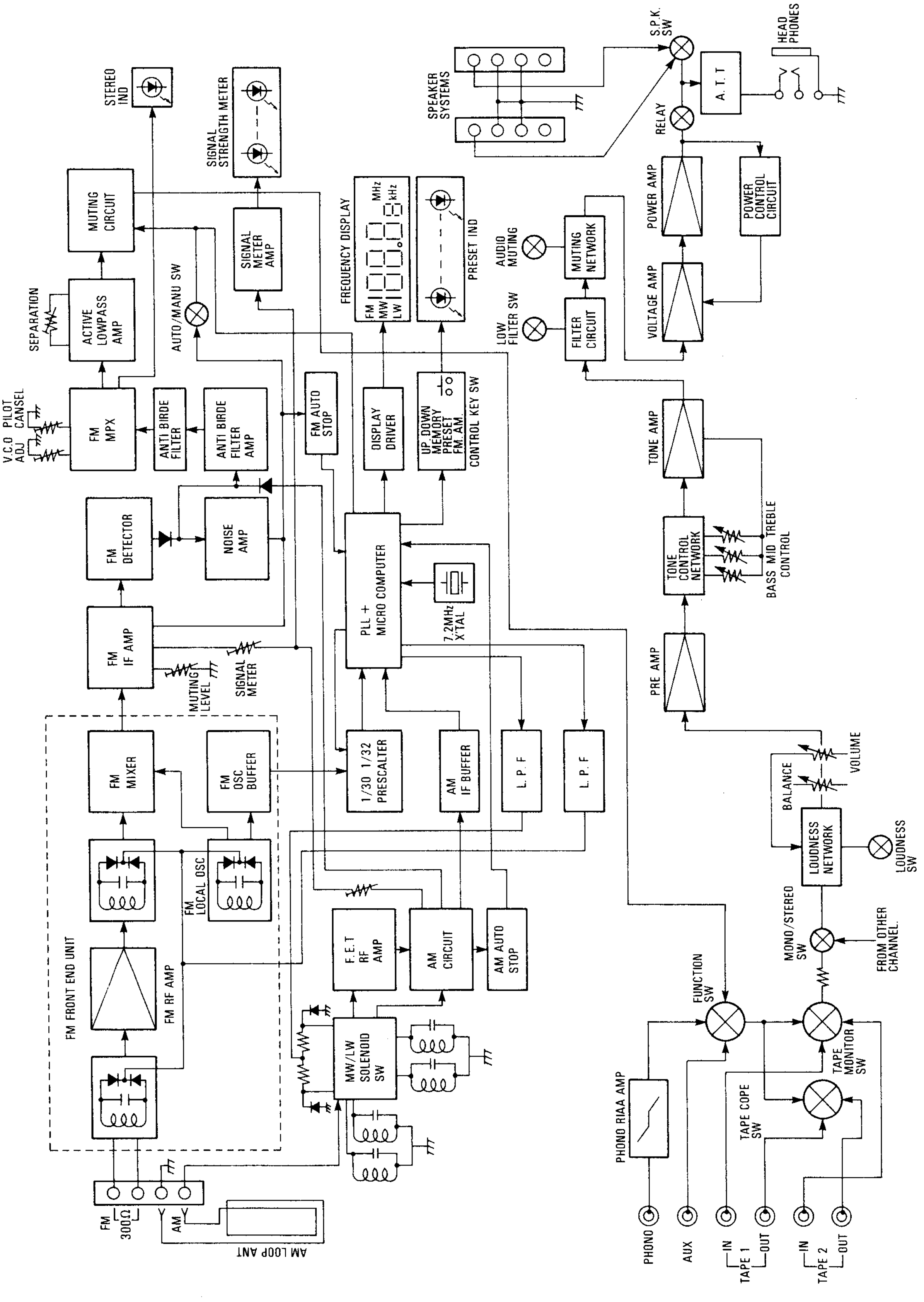
| PIN No. | | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Electrode Connection | W/O LW | IC | $f_2$ | $e_2$ | $d_2$ | $c_2$ | $g_2$ | $b_2$ | $b_1$<br>$e_1$ | $g_1$ | kHz | MHz | FM<br>Dp | AM | $a_1$ $d_1$<br>$c_1$ $f_1$ | G | G | F |
| | W/ LW | IC | $f_2$ | $e_2$ | $d_2$ | $c_2$ | $g_2$ | $b_2$ | $b_1$<br>$e_1$ | $g_1$ | kHz | MHz | FM<br>Dp<br>$a_1$ $c_1$<br>$d_1$ $f_1$ | MW | LW | G | G | F |

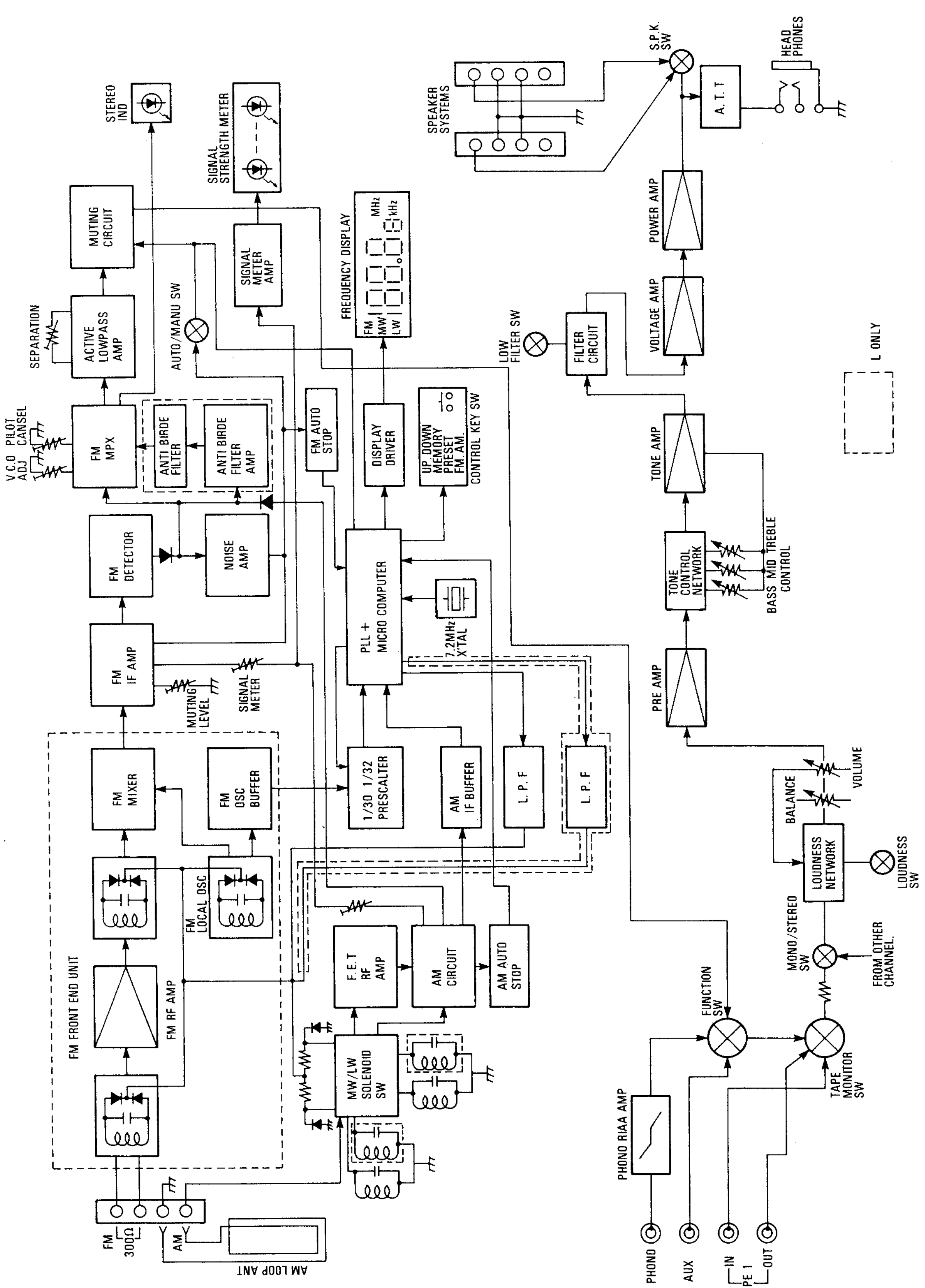

FM
MW
LW
188.8
MH,
KH,
5
4
3
2
1
1 - - - - 7
9 - - - - - - 18
20 - - - - - - - - - 34
35



# 9. BLOCK DIAGRAM

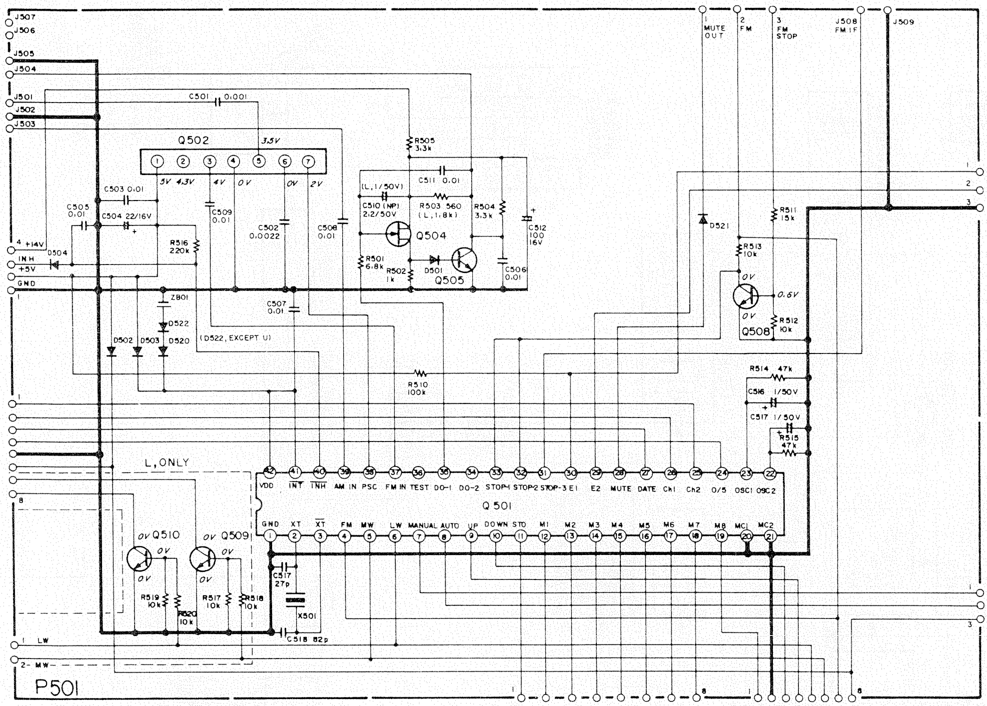

STEREO IND
SIGNAL STRENGTH METER
SPEAKER SYSTEMS
S.P.K. SW
HEAD PHONES
A. T. T
RELAY
MUTING CIRCUIT
SIGNAL METER AMP
FREQUENCY DISPLAY
FM
MW
MHz
kHz
PRESET IND
AUDIO MUTING
MUTING NETWORK
POWER AMP
POWER CONTROL CIRCUIT
SEPARATION
ACTIVE LOWPASS AMP
AUTO/MANU SW
LOW FILTER SW
FILTER CIRCUIT
VOLTAGE AMP
V.C.O ADJ
PILOT CANSEL
FM MPX
FM AUTO STOP
DISPLAY DRIVER
UP DOWN MEMORY PRESET FM.AM.
CONTROL KEY SW
TONE AMP
FM DETECTOR
NOISE AMP
PLL + MICRO COMPUTER
7.2MHz X'TAL
TONE CONTROL NETWORK
BASS MID TREBLE CONTROL
FM IF AMP
MUTING LEVEL
SIGNAL METER
PRE AMP
FM MIXER
FM OSC BUFFER
1/30 1/32 PRESCALTER
AM IF BUFFER
L. P. F
VOLUME
BALANCE
LOUDNESS NETWORK
LOUDNESS SW
FM LOCAL OSC
FM FRONT END UNIT
FM RF AMP
F.E.T RF AMP
AM CIRCUIT
AM AUTO STOP
CX IND
CX CONTROL AMP
FUNCTION SW
MONO/STEREO SW
FROM OTHER CHANNEL
AM ANT/OSC CIRCUIT
CX SW
PHONO RIAA AMP
TAPE COPE SW
TAPE MONITOR SW
FM 300Ω
AM
AM LOOP ANT
PHONO
AUX
IN
OUT
TAPE 1
IN
OUT
TAPE 2

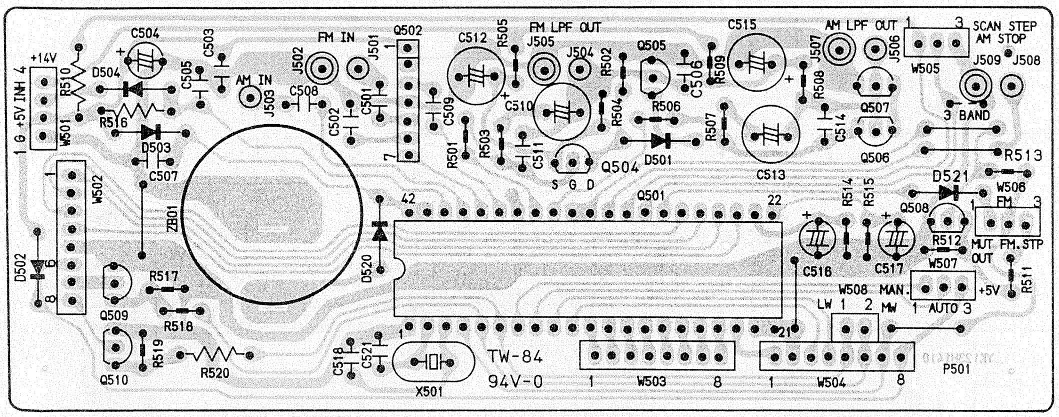

STEREO IND
SIGNAL STRENGTH METER
MUTING CIRCUIT
SIGNAL METER AMP
SEPARATION
ACTIVE LOWPASS AMP
AUTO/MANU SW
V.C.O ADJ
PILOT CANSEL
FM MPX
ANTI BIRDE FILTER
ANTI BIRDE FILTER AMP
FM AUTO STOP
DISPLAY DRIVER
UP DOWN MEMORY PRESET FM. AM.
CONTROL KEY SW
FREQUENCY DISPLAY
FM
MW
LW
MHz
kHz
PRESET IND
FM DETECTOR
NOISE AMP
PLL + MICRO COMPUTER
7.2MHz XTAL
FM IF AMP
MUTING LEVEL
SIGNAL METER
FM MIXER
FM OSC BUFFER
1/30 1/32 PRESCALTER
AM IF BUFFER
L. P. F
L. P. F
FM LOCAL OSC
FM FRONT END UNIT
FM RF AMP
F.E.T RF AMP
AM CIRCUIT
AM AUTO STOP
MW/LW SOLENOID SW
FM 300Ω
AM
AM LOOP ANT
SPEAKER SYSTEMS
S.P.K. SW
HEAD PHONES
A. T. T
RELAY
POWER AMP
POWER CONTROL CIRCUIT
AUDIO MUTING
MUTING NETWORK
LOW FILTER SW
FILTER CIRCUIT
VOLTAGE AMP
TONE AMP
TONE CONTROL NETWORK
BASS MID TREBLE CONTROL
PRE AMP
VOLUME
BALANCE
LOUDNESS NETWORK
LOUDNESS SW
MONO/STEREO SW
FROM OTHER CHANNEL
FUNCTION SW
TAPE MONITOR SW
TAPE COPE SW
PHONO RIAA AMP
PHONO
AUX
IN
TAPE 1
OUT
IN
TAPE 2
OUT


STEREO IND
SIGNAL STRENGTH METER
MUTING CIRCUIT
SIGNAL METER AMP
FREQUENCY DISPLAY
FM
MW
LW
MHz
kHz
SPEAKER SYSTEMS
S.P.K. SW
HEAD PHONES
A.T.T
POWER AMP
VOLTAGE AMP
SEPARATION
ACTIVE LOWPASS AMP
AUTO/MANU SW
LOW FILTER SW
FILTER CIRCUIT
L ONLY
PILOT CANSEL
V.C.O ADJ
FM MPX
ANTI BIRDE FILTER
ANTI BIRDE FILTER AMP
FM AUTO STOP
DISPLAY DRIVER
UP, DOWN MEMORY PRESET FM,AM
CONTROL KEY SW
TONE AMP
FM DETECTOR
NOISE AMP
PLL + MICRO COMPUTER
7.2MHz X'TAL
TONE CONTROL NETWORK
BASS MID TREBLE CONTROL
FM IF AMP
MUTING LEVEL
SIGNAL METER
PRE AMP
FM MIXER
FM OSC BUFFER
1/30 1/32 PRESCALTER
AM IF BUFFER
L.P.F
L.P.F
VOLUME
BALANCE
LOUDNESS NETWORK
LOUDNESS SW
FM LOCAL OSC
FM FRONT END UNIT
FM RF AMP
F.E.T RF AMP
AM CIRCUIT
AM AUTO STOP
MONO/STEREO SW
FROM OTHER CHANNEL
FUNCTION SW
MW/LW SOLENOID SW
PHONO RIAA AMP
TAPE MONITOR SW
FM 300Ω
AM
AM LOOP ANT
PHONO
AUX
IN
OUT
TAPE 1

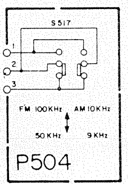
# 10. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

## 10.1 U-COM Assembly (P501) Schematic Diagram and Component Locations

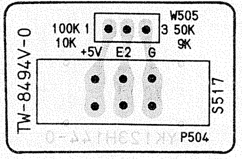

J507
J506
J505
J504
J501
J502
J503
C501 0.001
Q502
3.3V
5V 4.3V 4V 0V 0V 2V
C503 0.01
C505 0.01
C504 22/16V
C509 0.01
C502 0.0022
C508 0.01
R516 220k
D504
+14V
INH
+5V
GND
Z801
D522
D502 D503 D520
(D522, EXCEPT U)
C507 0.01
R505 3.3k
C511 0.01
C510 (NP) 2.2/50V
R503 560
R504 3.3k
C512 100 16V
Q504
Q505
R501 6.8k
R502 1k
D501
C506 0.01
R510 100k
MUTE OUT
FM
FM STOP
J508 FM IF
J509
D521
R511 15k
R513 10k
0.6V
Q508
R512 10k
R514 47k
C516 1/50V
C517 1/50V
R515 47k
L, ONLY
VDD INT INH AM IN PSC FM IN TEST DO-1 DO-2 STOP1 STOP2 STOP-3 E1 E2 MUTE DATE Ch1 Ch2 0/5 OSC1 OSC2
Q501
GND XT XT FM MW LW MANUAL AUTO UP DOWN STD M1 M2 M3 M4 M5 M6 M7 M8 MC1 MC2
Q510
Q509
R519 10k
R517 10k
R518 10k
R520 10k
C517 27p
X501
C518 82p
LW
MW
P501

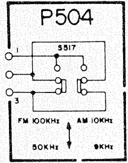

+14V
1 G +5V INH 4
W501
R510
D504
C504
C503
C505
R516
D503
C507
W502
Z801
D502
1
8
AM IN
J503
C508
J502
FM IN
J501
C502
C501
Q502
1
7
C512
R505
FM LPF OUT
J505
J504
C509
C510
R501
R503
C511
S G D
Q504
D501
R502
R504
Q505
R506
C506
R509
R507
C515
AM LPF OUT
J507
J506
R508
C514
Q507
Q506
SCAN STEP AM STOP
1 3
W505
J509 J508
3 BAND
R513
D521
W506
FM
MUT OUT
FM.STP
R511
C513
R514
R515
Q508
R512
W507
C516
C517
W508
MAN.
LW 1 2 MW 1 AUTO 3
+5V
42
22
Q501
21
1
D520
R517
Q509
R518
R519
R520
Q510
C518
C521
X501
TW-84
94V-0
1 W503 8
1 W504 8
P501

## 10.2 Scan Step Assembly (P504) Schematic Diagram and Component Locations (SR620/SR520)


S517
1
2
3
FM 100KHz
AM 10KHz
50KHz
9KHz
P504

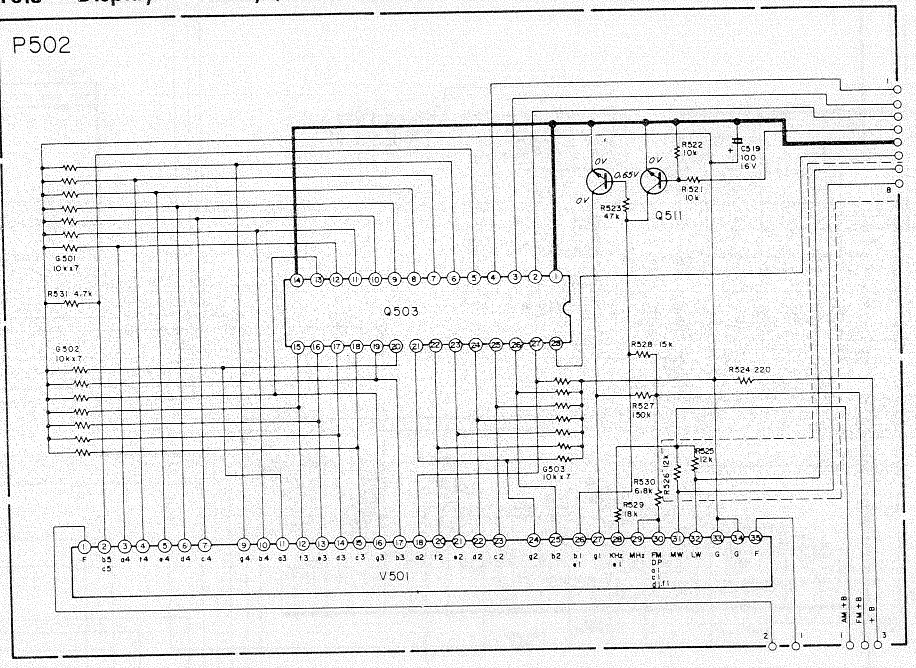
SR620 ONLY

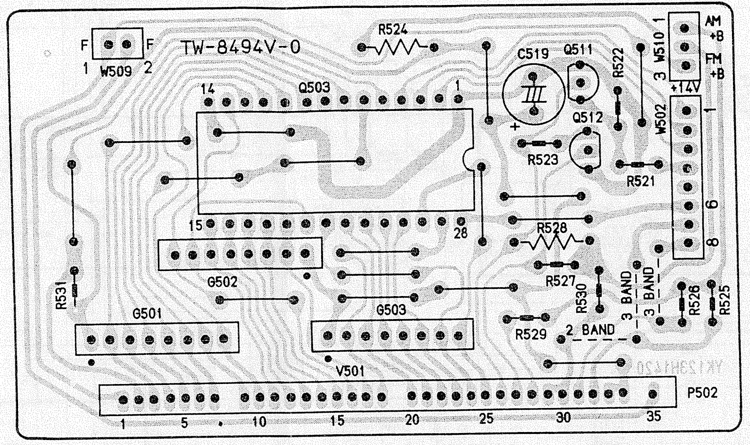

W505
100K 1
10K
3 50K
9K
+5V E2 G
TW-8494V-0
S517
P504


P504
S517
1
3
FM 100KHz
AM 10KHz
50KHz
9KHz

SR520 ONLY

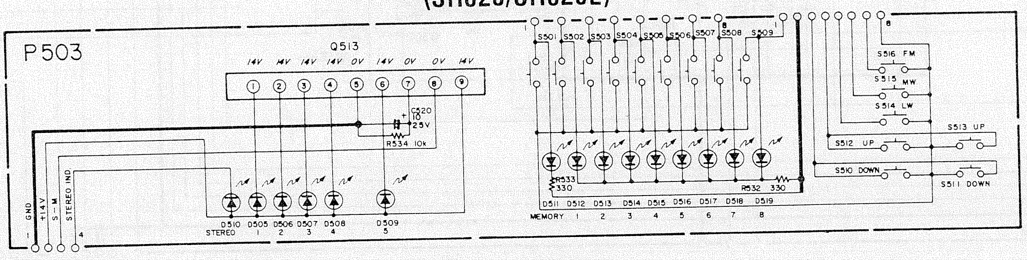
## 10.3 Display Assembly (P502) Schematic Diagram and Component Locations


P502
Q503
Q511
V501
G501 10k×7
G502 10k×7
G503 10k×7
R531 4.7k
R522 10k
R521 10k
R523 47k
C519 100 16V
R528 15k
R527 150k
R524 220
R530 6.8k
R529 18k
R526 12k
R525 12k

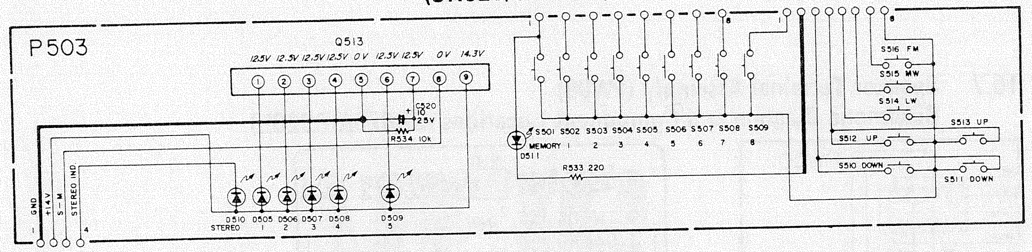

TW-8494V-0
W509
R524
C519
Q511
R522
W510
AM +B
FM +B
+14V
Q503
Q512
R523
R521
W502
R528
R527
R530
3 BAND
R526
R525
G502
G501
G503
R529
2 BAND
V501
R531
P502
1
5
10
15
20
25
30
35

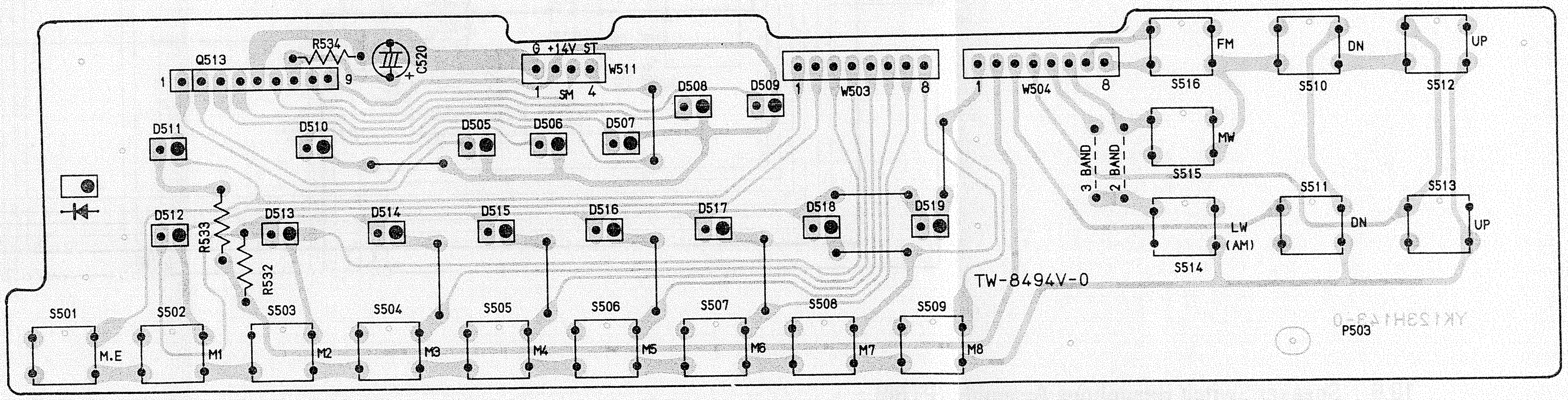
## 10.4 Key Switch Assembly (P503) Schematic Diagram and Component Locations

### (SR620/SR620L)

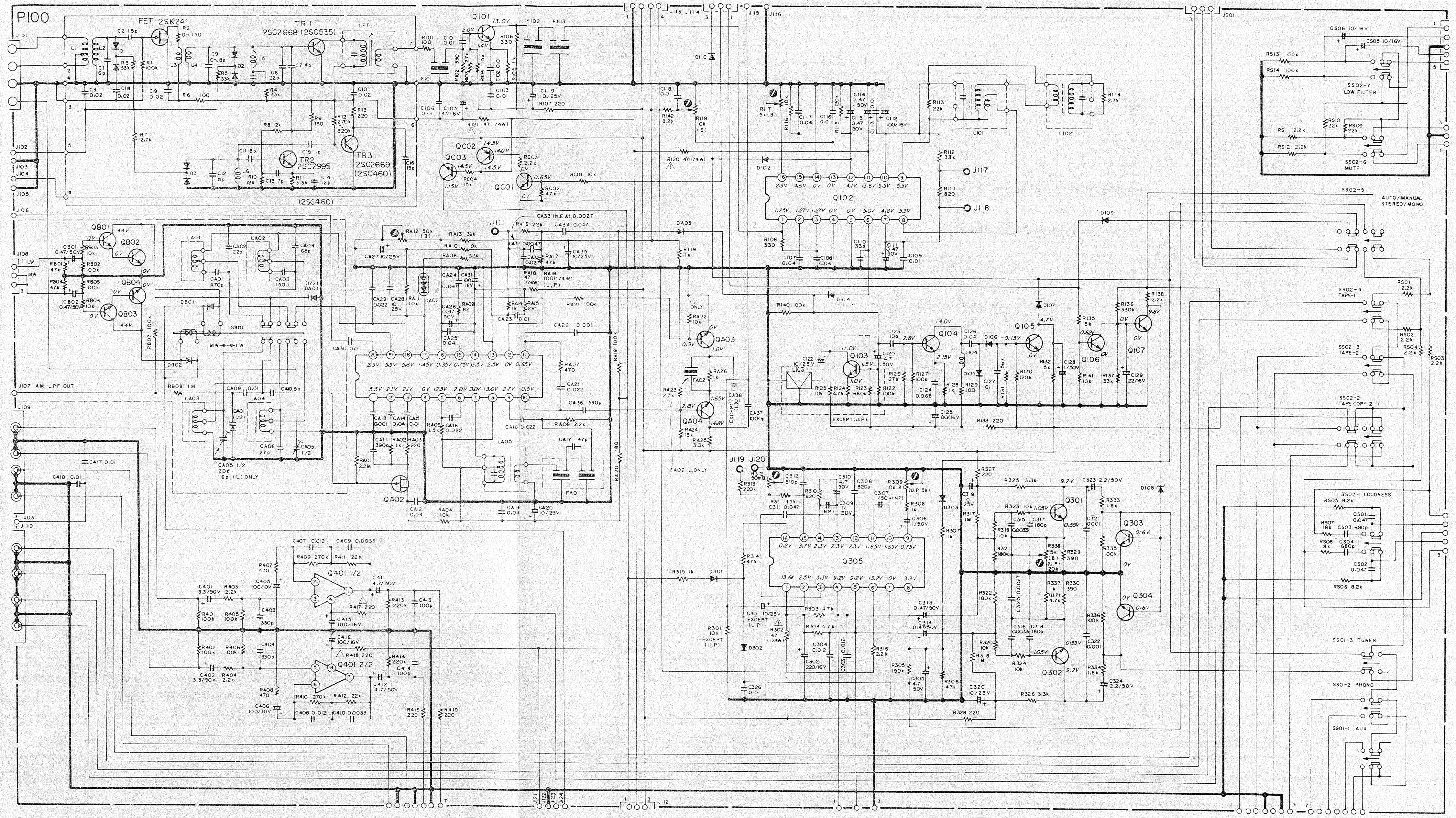

P503
Q513
C520
R534 10k
R533 330
R532 330
S516 FM
S515 MW
S514 LW
S513 UP
S512 UP
S510 DOWN
S511 DOWN
MEMORY
GND
+14V
S-M
STEREO IND
D510 D505 D506 D507 D508 D509
STEREO

### (SR520/SR520L)

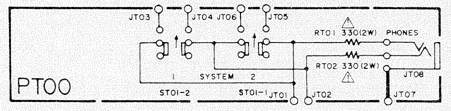

P503
Q513
C520
R534 10k
R533 220
S501 S502 S503 S504 S505 S506 S507 S508 S509
MEMORY
D511
S516 FM
S515 MW
S514 LW
S513 UP
S512 UP
S510 DOWN
S511 DOWN
GND
+14V
S-M
STEREO IND
D510 D505 D506 D507 D508 D509
STEREO

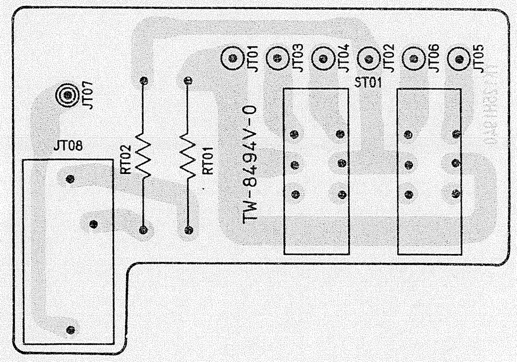

Q513
R534
C520
W511
G +14V ST
SM
W503
W504
D508
D509
D511
D510
D505
D506
D507
D512
R533
D513
D514
D515
D516
D517
D518
D519
R532
S516 FM
S510 DN
S512 UP
S515 MW
3 BAND
2 BAND
S511 DN
S513 UP
S514 LW (AM)
TW-8494V-0
P503
S501 M.E
S502 M1
S503 M2
S504 M3
S505 M4
S506 M5
S507 M6
S508 M7
S509 M8

## 10.5 Tuner/Phono Assembly (P100) Schematic Diagram and Component Locations (SR620/SR620L)

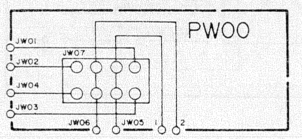

P100
FET 2SK241
TR1 2SC2668 (2SC535)
TR2 2SC2995
TR3 2SC2669 (2SC460)
(2SC460)
IFT
Q101
QC01
QC02
QC03
Q102
L101
L102
J117
J118
QB01
QB02
QB03
QB04
LA01
LA02
LA03
LA04
LA05
J111
QA02
QA03
QA04
FA01
FA02 L ONLY
J107 AM L.P.F OUT
Q103
Q104
Q105
Q106
Q107
J119
J120
Q301
Q302
Q303
Q304
Q305
Q401 1/2
Q401 2/2
S502-7 LOW FILTER
S502-6 MUTE
S502-5 AUTO/MANUAL STEREO/MONO
S502-4 TAPE-1
S502-3 TAPE-2
S502-2 TAPE COPY 2→1
S502-1 LOUDNESS
S501-3 TUNER
S501-2 PHONO
S501-1 AUX
J113
J114
J115
J116
J501
J112

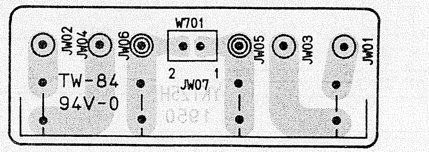
## 10.6 Speaker Switch Headphone Assembly (PT00) Schematic Diagram and Component Locations (SR620/SR620L)

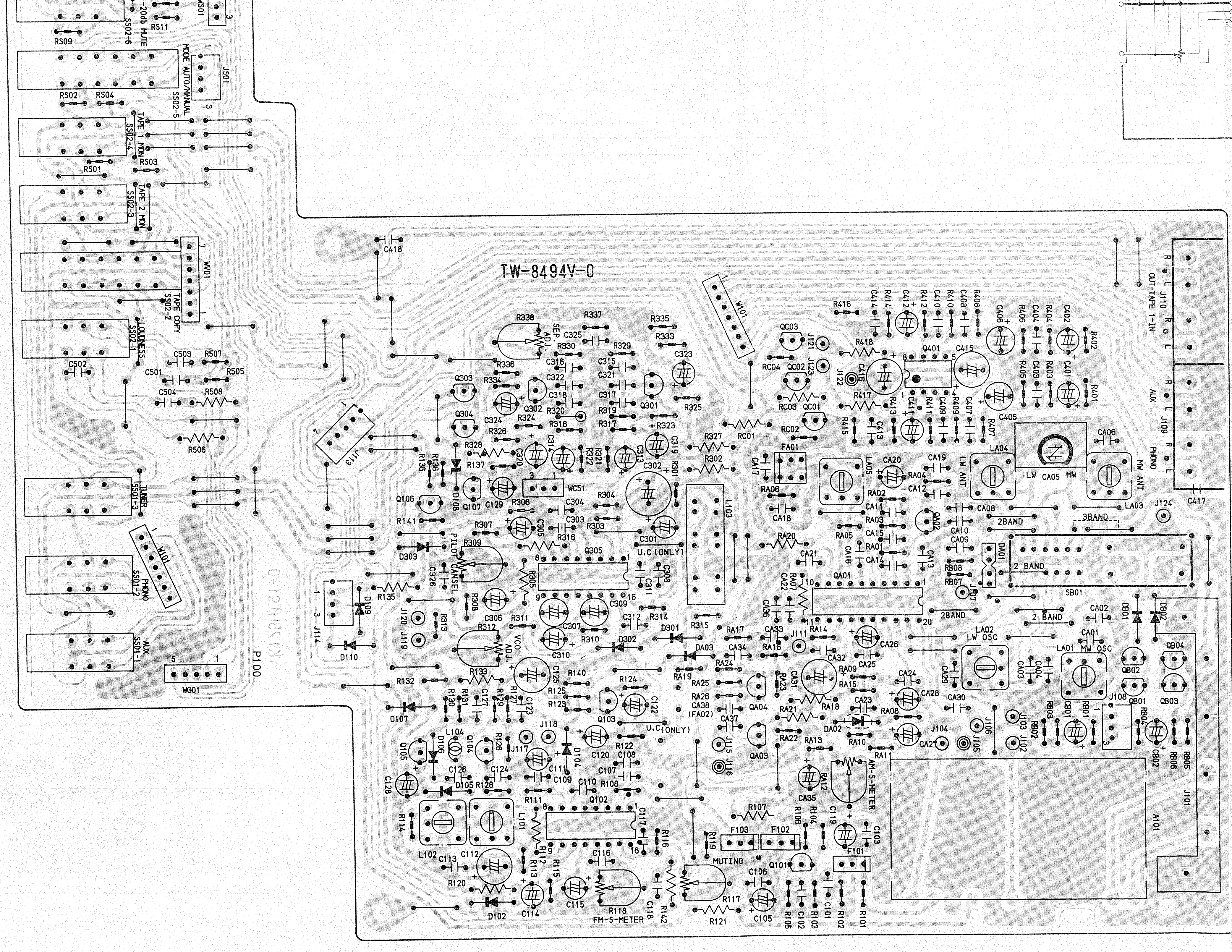

PT00
JT03
JT04
JT06
JT05
RT01 330(2W)
RT02 330(2W)
PHONES
SYSTEM
1
2
ST01-2
ST01-1
JT01
JT02
JT07
JT08


JT07
JT08
RT02
RT01
TW-8494V-0
JT01
JT03
JT04
JT02
JT06
JT05
ST01

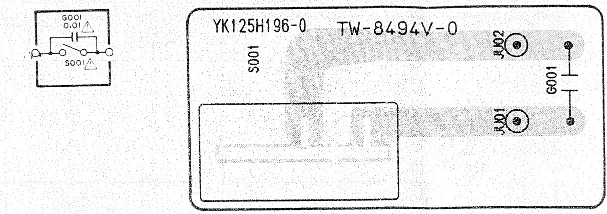
## 10.7 Speaker Terminal Assembly (PW00) Schematic Diagram and Component Locations (SR620/SR620L)


PW00
JW01
JW02
JW04
JW03
JW07
JW06
JW05

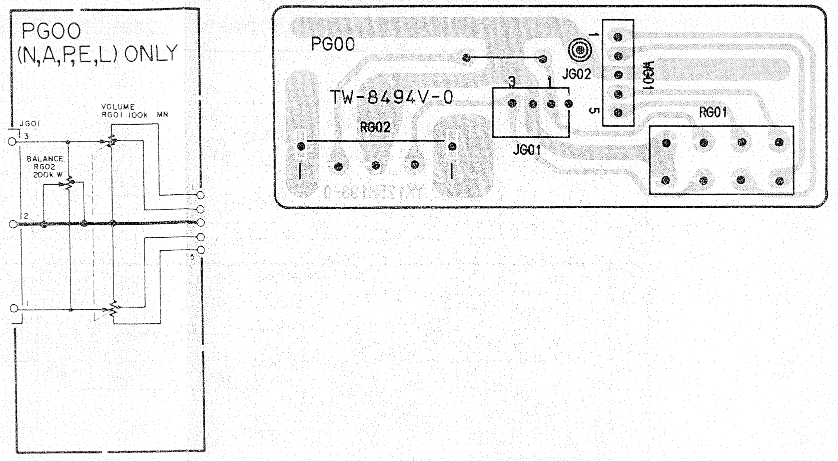

JW02
JW04
JW06
W701
JW05
JW03
JW01
TW-84
94V-0
JW07
2
1


TW-8494V-0
YK125H191-0
P100
J112
J501
J502
W501
W101
WC51
WG01
WL01
J113
J114
SS02-7 FILTER LOW
SS02-6 MUTE -20db
SS02-5 MODE AUTO/MANUAL
SS02-4 TAPE 1 MON
SS02-3 TAPE 2 MON
SS02-2 TAPE COPY
SS02-1 LOUDNESS
SS01-3 TUNER
SS01-2 PHONO
SS01-1 AUX
SEP. ADJ.
PILOT CANSEL
VCO ADJ.
AM-S-METER
FM-S-METER
MUTING
U.C (ONLY)
OUT-TAPE 1-IN
J110
AUX
J109
PHONO
MW ANT
LW ANT
LW CA05 MW
3BAND
2BAND
2 BAND
SB01
LA02 LW OSC
LA01 MW OSC
LA04
LA03
LA05
J124
A101
J101
Q401
Q305
QA01
Q102
C417
C418

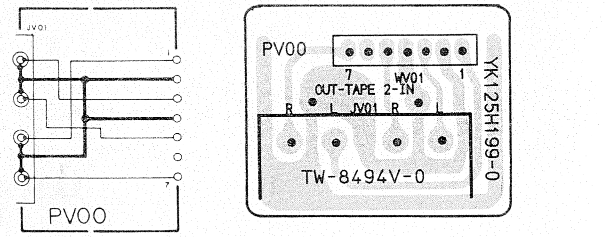
## 10.8 Power Switch Assembly (PU00)
### Schematic Diagram and Component Locations (SR620/SR620L)


S001
YK125H196-0
TW-8494V-0
S001
JU02
JU01
C001

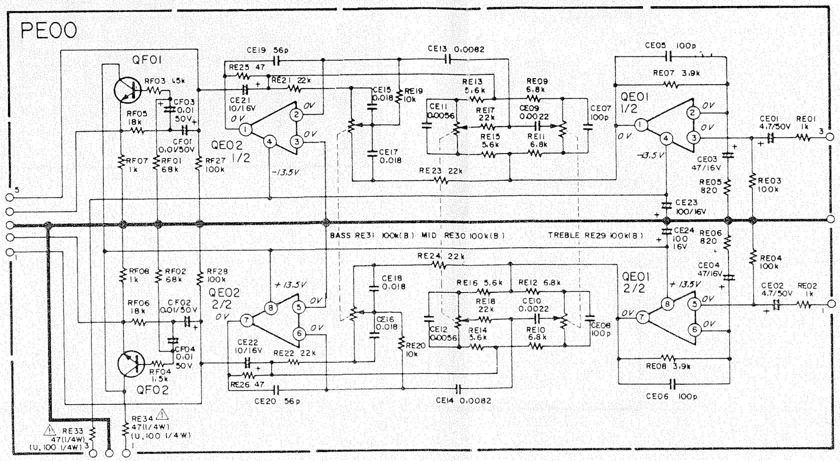
## 10.9 Volume/Balance Assembly (PG00)
### Schematic Diagram and Component Locations (SR620/SR620L)

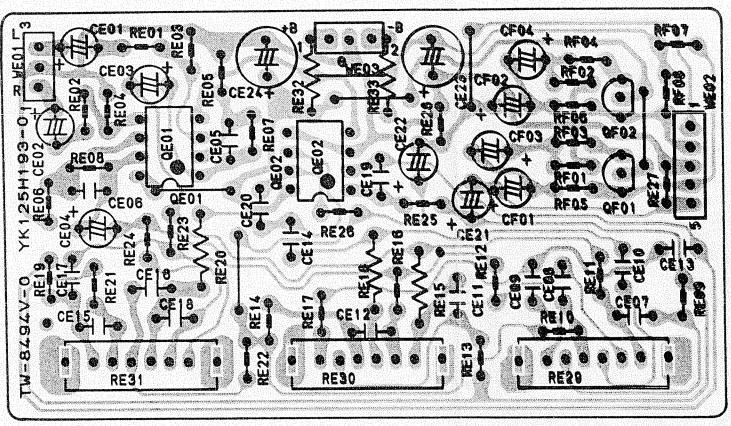

PG00
(N,A,P,E,L) ONLY
JG01
VOLUME RG01 100K MN
BALANCE RG02 200K W
PG00
TW-8494V-0
RG02
JG02
JG01
WG01
RG01
YK125H198-0

## 10.10 Tape 2 Monitor Assembly (PV00)
### Schematic Diagram and Component Locations (SR620/SR620L)

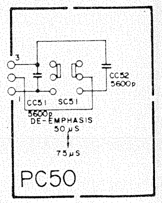

JV01
PV00
PV00
WV01
OUT-TAPE 2-IN
R
L
JV01
TW-8494V-0
YK125H199-0

## 10.11 Tone Amp. Assembly (PE00)
## Schematic Diagram and Component Locations (SR620/SR620L)

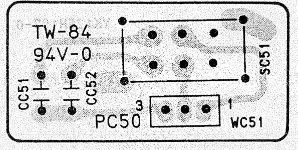

PE00
QF01
QF02
QE01 1/2
QE01 2/2
QE02 1/2
QE02 2/2
BASS RE31 100k(B)
MID RE30 100k(B)
TREBLE RE29 100k(B)


YK125H193-0
TW-8494V-0
RE31
RE30
RE29
QE01
QE02
QF01
QF02

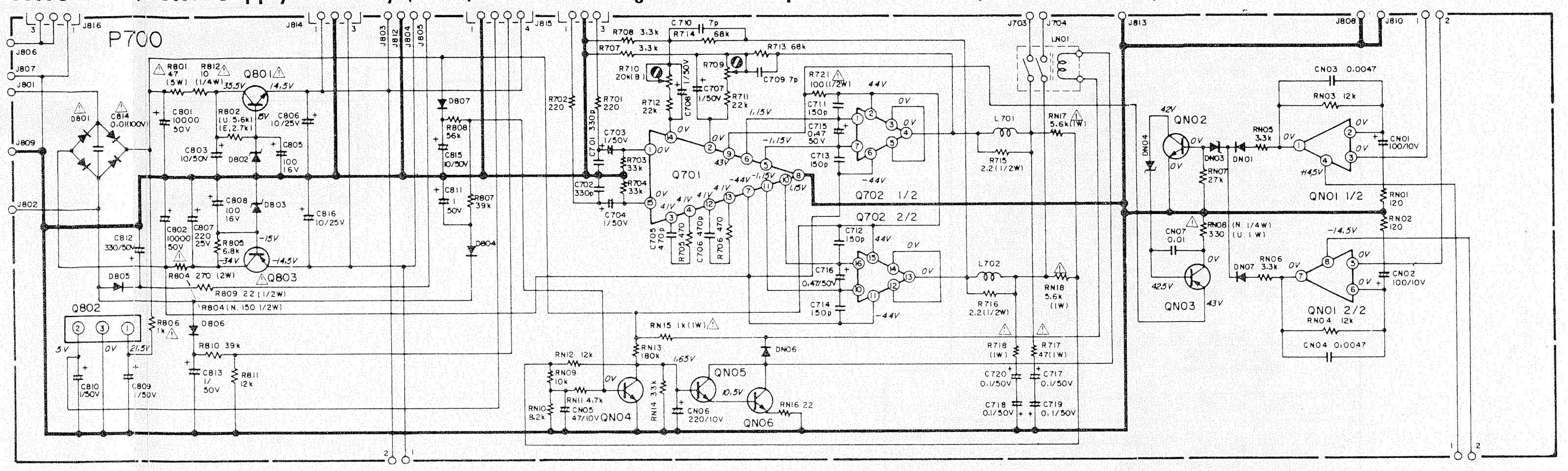
## 10.12 DE-Emphasis Switch Assembly (PC50)
## Schematic Diagram and Component Locations (SR620 ONLY)

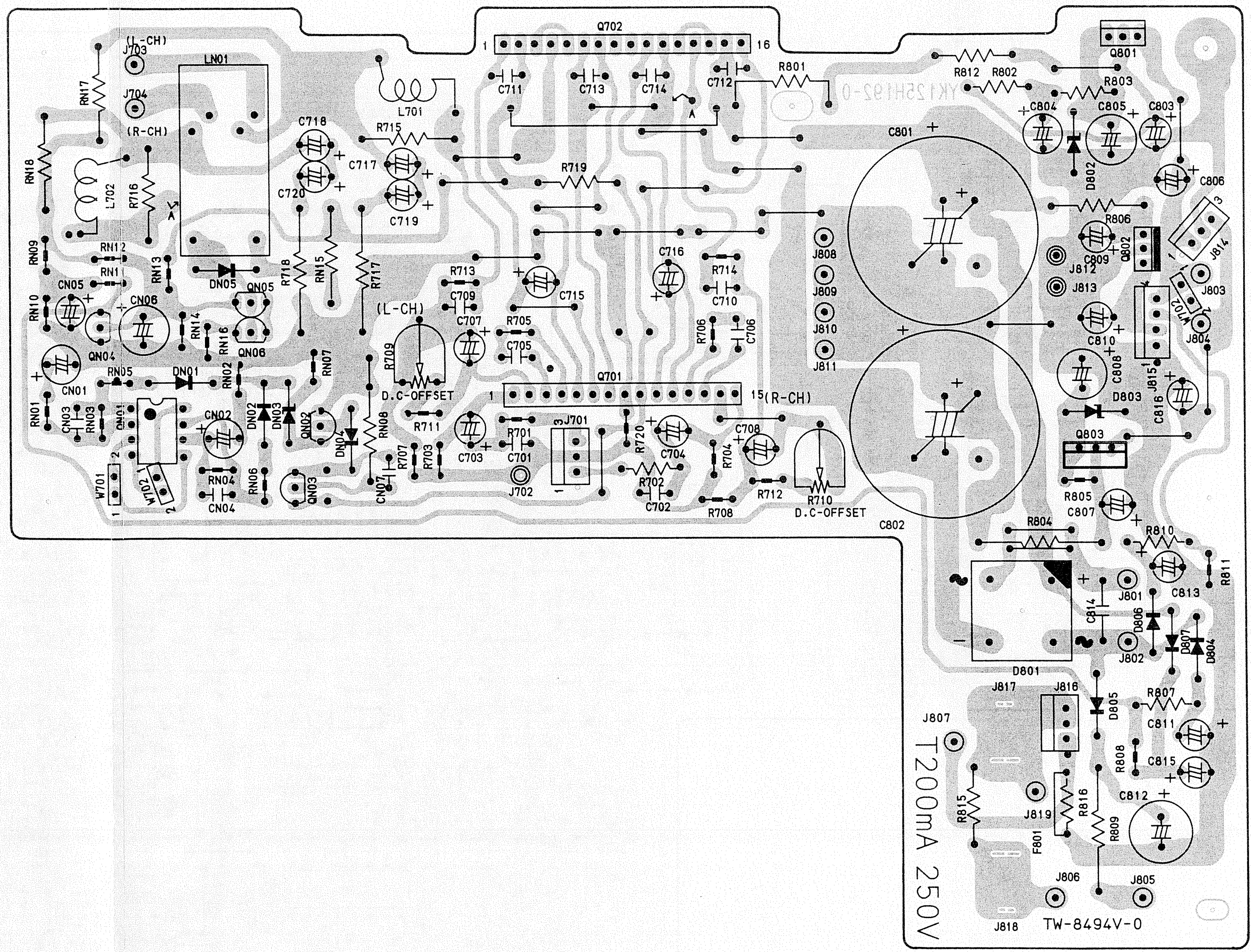

PC50
CC51
SC51
CC52 5600p
DE-EMPHASIS
50 μS
75 μS

(E)ONLY

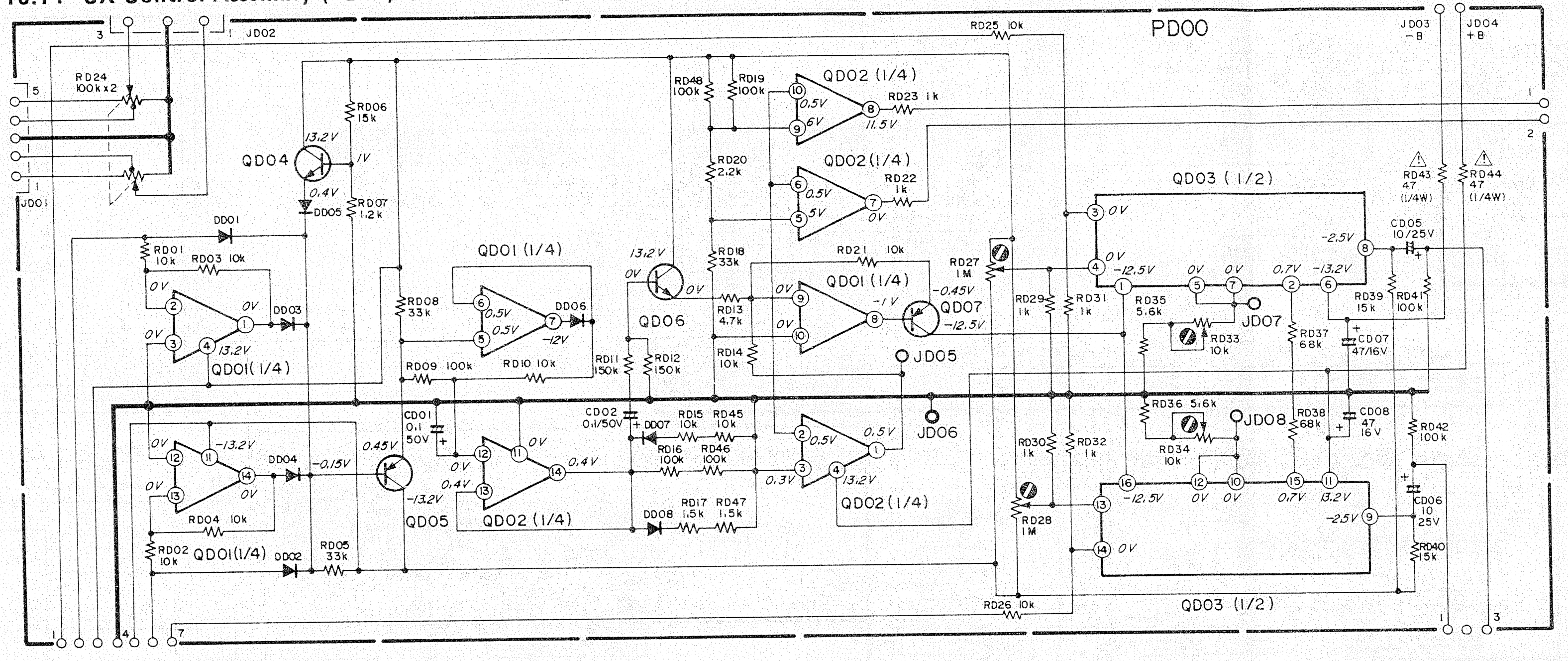

TW-84
94V-0
CC51
CC52
SC51
PC50
WC51

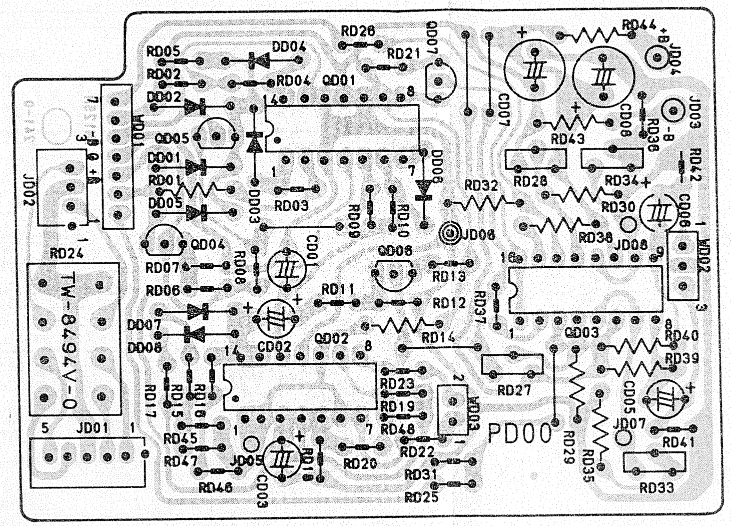
## 10.13 Main/Power Supply Assembly (P700) Schematic Diagram and Component Locations (SR620/SR620L)


P700
Q701
Q702 1/2
Q702 2/2
QN01 1/2
QN01 2/2
QN02
QN03
QN04
QN05
QN06
Q801
Q802
Q803
L701
L702
LN01

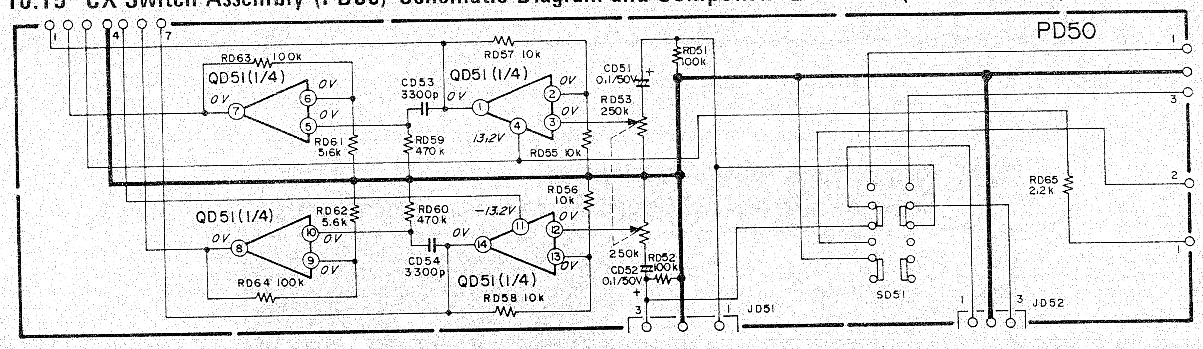

Q702
Q701
(L-CH)
(R-CH)
D.C-OFFSET
R709
R710
LN01
C801
C802
YK125H192-0
T200mA 250V
TW-8494V-0
F801

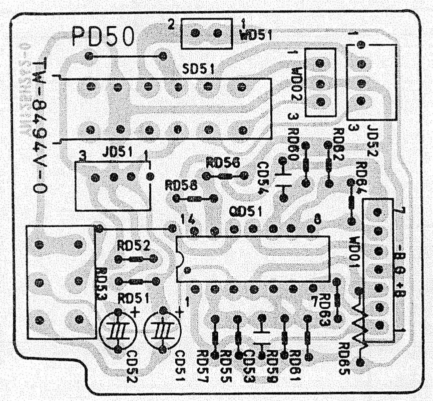
## 10.14 CX Control Assembly (PD00) Schematic Diagram and Component Locations (SR620 ONLY)


PD00
JD01
JD02
JD03 -B
JD04 +B
JD05
JD06
JD07
JD08
QD01 (1/4)
QD02 (1/4)
QD03 (1/2)
QD04
QD05
QD06
QD07
RD24 100k×2
RD25 10k
RD26 10k

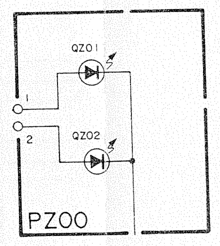

PD00
TW-8494V-0
JD01
JD02
JD03
JD04
JD05
JD06
JD07
QD01
QD02
QD03
QD04
QD05
QD06
QD07
WD01
WD02
WD03

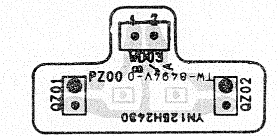
## 10.15 CX Switch Assembly (PD50) Schematic Diagram and Component Locations (SR620 ONLY)


PD50
QD51 (1/4)
SD51
JD51
JD52
RD65 2.2k

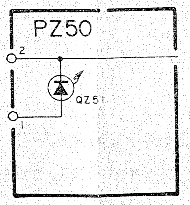

PD50
TW-8494V-0
WD51
WD01
WD02
SD51
JD51
JD52
QD51

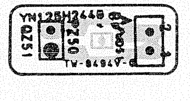
## 10.16 CAL. L.E.D. Assembly (PZ00) Schematic Diagram and Component Locations (SR620 ONLY)


QZ01
QZ02
PZ00

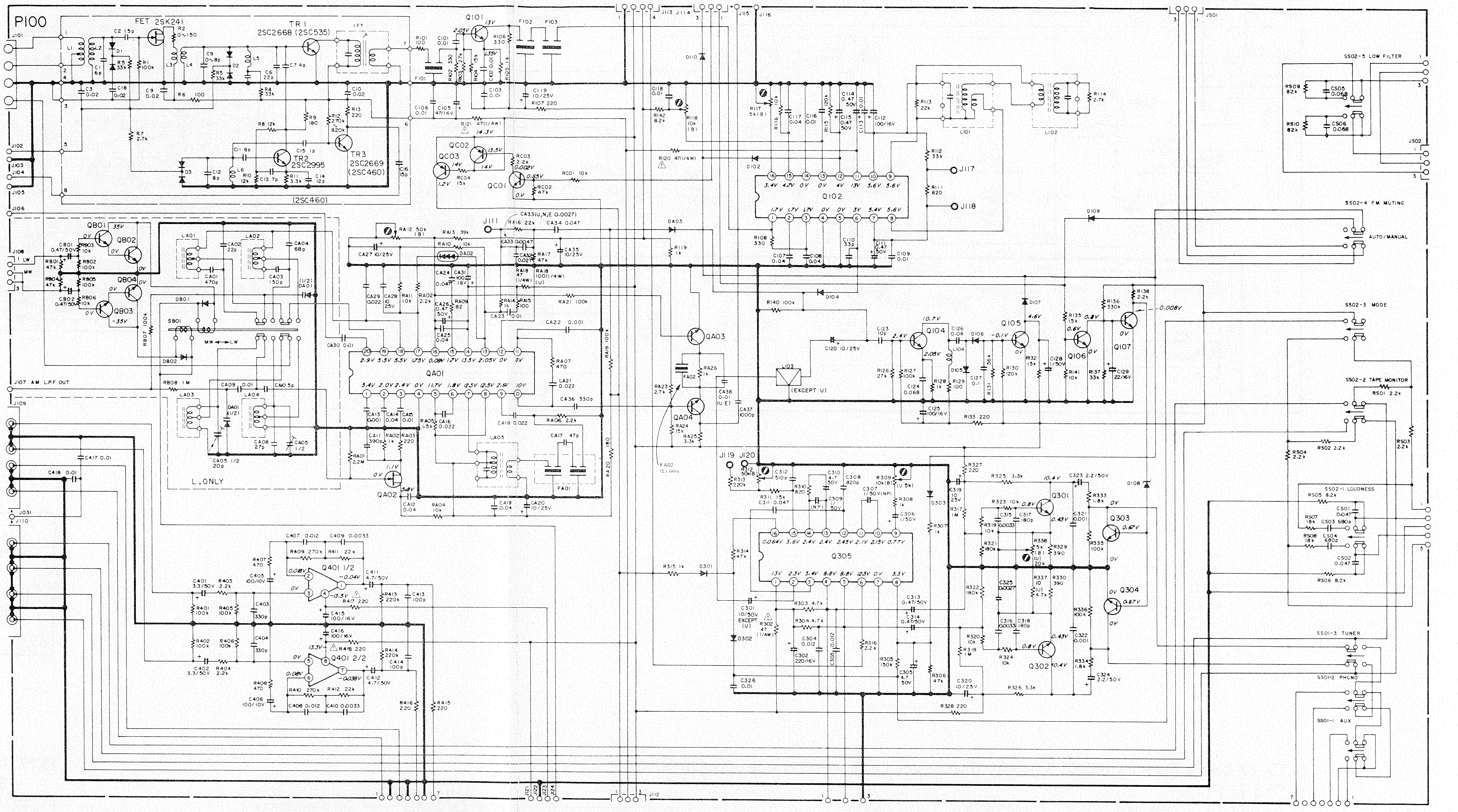

PZ00
WD03
QZ01
QZ02
YN126H2450

## 10.17 IND. L.E.D. Assembly (PZ51) Schematic Diagram and Component Locations (SR620 ONLY)

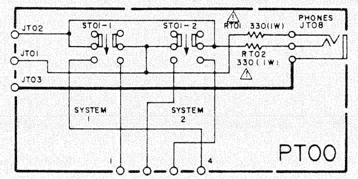


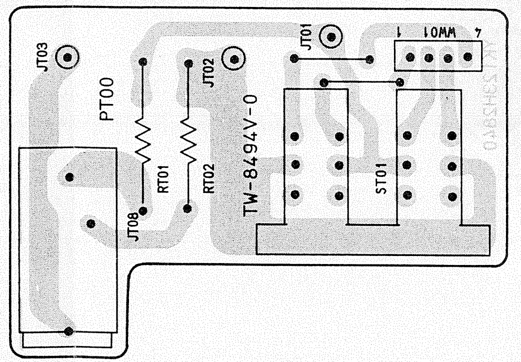

PZ50
QZ51
YN125H2448

## 10.18 Tuner/Phono Assembly (P100) Schematic Diagram and Component Locations (SR520/SR520L)

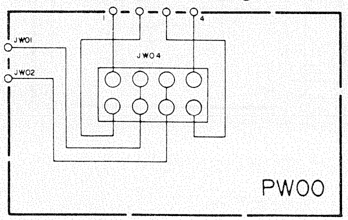

P100
FET 2SK241
TR1 2SC2668 (2SC535)
IFT
TR2 2SC2995
TR3 2SC2669 (2SC460)
(2SC460)
Q101
QC01
QC02
QC03
Q102
QB01
QB02
QB03
QB04
LA01
LA02
LA03
LA04
SB01
MW LW
QA01
QA02
QA03
QA04
L ONLY
Q401 1/2
Q401 2/2
Q104
Q105
Q106
Q107
L101
L102
J117
J118
Q301
Q302
Q303
Q304
Q305
J107 AM L.P.F OUT
S502-5 LOW FILTER
S502-4 FM MUTING
AUTO/MANUAL
S502-3 MODE
S502-2 TAPE MONITOR
S502-1 LOUDNESS
S501-3 TUNER
S501-2 PHONO
S501-1 AUX
(EXCEPT U)

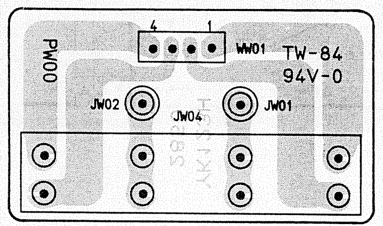
## 10.19 Speaker Switch Headphone Assembly (PT00)
### Schematic Diagram and Component Locations (SR520/SR520L)

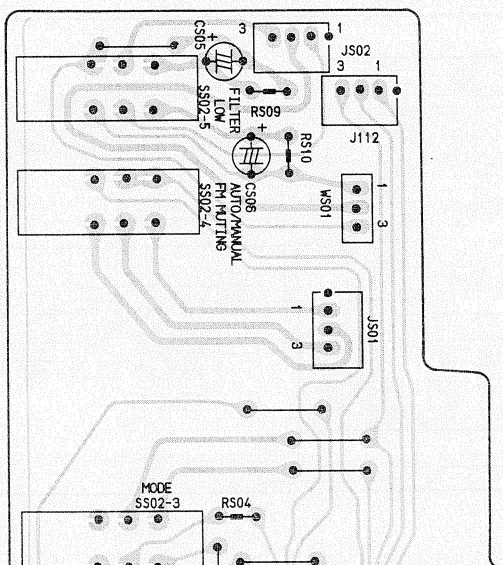
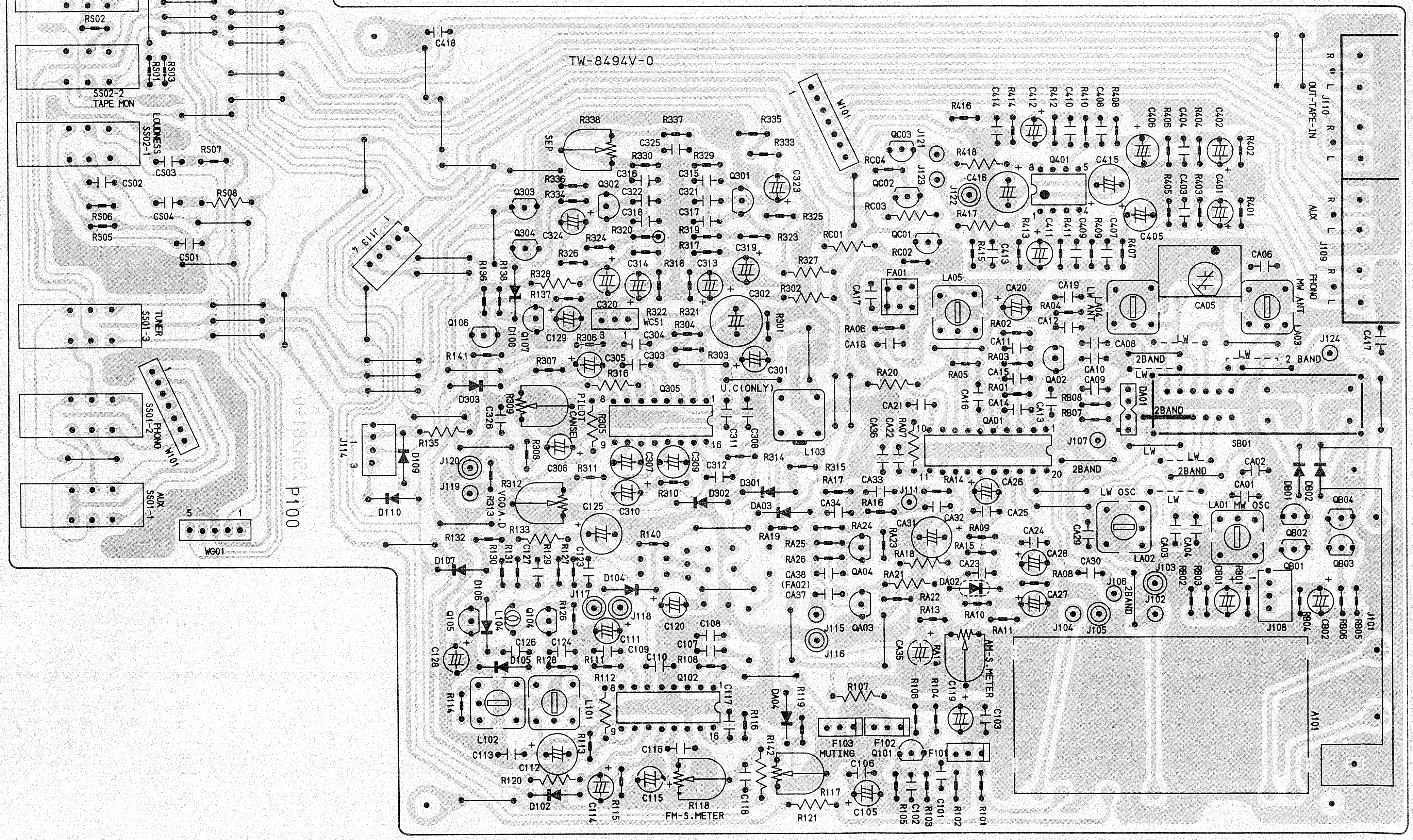

JT02
JT01
JT03
ST01-1
ST01-2
RT01 330(1W)
RT02 330(1W)
PHONES
JT08
SYSTEM 1
SYSTEM 2
PT00


JT03
PT00
JT01
JT02
RT01
RT02
JT08
ST01
TW-8494V-0
1 10MM 7

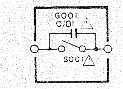
## 10.20 Speaker Terminal Assembly (PW00)
### Schematic Diagram and Component Locations (SR520/SR520L)

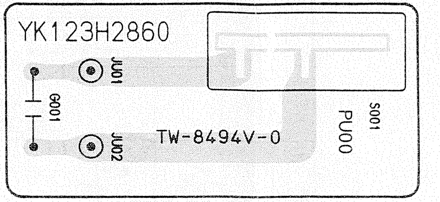

JW01
JW02
JW04
PW00


PW00
4 1
WW01
TW-84
94V-0
JW02
JW04
JW01

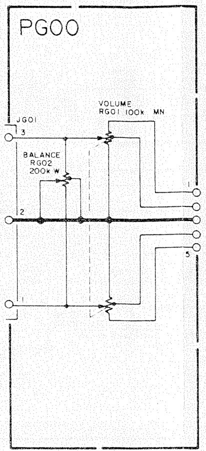


TW-8494V-0
P100
J112
JS02
JS01
WS01
WG01
W101
W101
S502-5 FILTER LOW
S502-4 AUTO/MANUAL FM MUTING
CS05
CS06
RS09
RS10
MODE S502-3
RS04
RS02
S502-2 TAPE MON
RS01
RS03
LOUDNESS S502-1
RS07
CS02
CS03
RS08
RS06
CS04
RS05
CS01
TUNER S501-3
PHONO S501-2
AUX S501-1
J113
J114
J119
J120
D109
D110
C418
SEP
R338
R337
R335
R333
C325
R330
R329
Q301
C323
Q303
Q302
C316
C322
C318
C315
C321
C317
R325
Q304
C324
R320
R319
R317
R323
R326
R324
C319
C313
C314
R318
R327
R328
R137
C320
R322
R321
C302
R302
R301
WC51
R304
Q106
Q107
D108
C129
R306
C304
C303
R303
C301
R141
R307
C305
R316
Q305
U.C(ONLY)
D303
R309
PILOT CANSEL
R305
C311
C308
R135
R308
C306
R311
C307
C309
C312
R314
L103
R315
R312
VCO.A.D
R313
C125
C310
R310
D302
D301
DA03
R132
R133
R131
R130
R129
R127
C127
R140
D107
D104
D106
J117
Q105
L104
Q104
R126
J118
C120
C108
C128
C126
C124
C111
D105
R128
R111
C109
C110
C107
R108
R112
Q102
R114
L101
C117
R116
DA04
R119
R142
L102
C113
C112
R113
C116
R120
D102
C114
C115
R118 FM-S.METER
R115
C118
R117
R121
C106
C105
R107
F103 MUTING
F102
Q101
F101
C102
C101
R105
R103
R102
R101
R106
R104
C119
C103
AM-S.METER
A101
J115
J116
QA03
QA04
CA35
RA13
RA12
RA11
RA10
RA22
DA02
RA21
CA23
RA15
RA18
RA23
RA24
CA31
CA32
RA09
RA16
CA33
CA34
RA17
RA14
CA26
CA25
RA19
RA25
RA26
CA38 (FA02)
CA37
J111
W101
RC04
QC02
QC03
J121
J123
RC03
QC01
RC01
RC02
J122
FA01
CA17
RA06
CA18
RA20
CA21
RA07
CA22
CA36
QA01
LA05
CA20
RA02
RA04
CA12
CA11
RA03
CA15
RA01
CA14
CA16
CA13
RA05
QA02
CA19
LW ANT
LA04
CA08
CA10
CA09
RB08
RB07
DA01
2BAND
J107
2BAND
LW OSC
CA24
CA29
CA28
CA27
CA30
RA08
J106
J104
J105
CA03
CA04
LA02
J103
J102
RB02
RB03
CB01
RB01
SB01
CA02
CA01
LA01 MW OSC
DB01
DB02
QB04
QB02
QB01
QB03
J108
RB04
CB02
RB05
J101
LW
2 BAND
J124
C417
LA03
MW ANT
PHONO
J109
AUX
J110 OUT-TAPE-IN
R
L
CA06
CA05
R416
C414
R414
C412
R412
C410
R410
C408
R408
C406
R406
R404
C404
C402
R402
R418
C416
Q401
C415
C405
R405
C403
R403
C401
R401
R417
R413
C411
R411
C409
R409
C407
R407
R415
C413

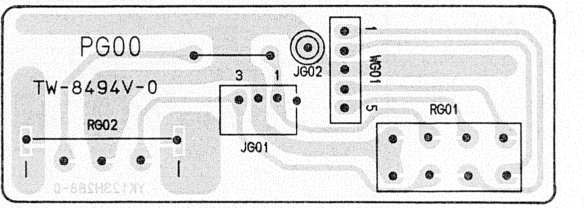
## 10.21 Power Switch Assembly (PU00)
## Schematic Diagram and Component Locations (SR520/SR520L)


G001
0.01
S001

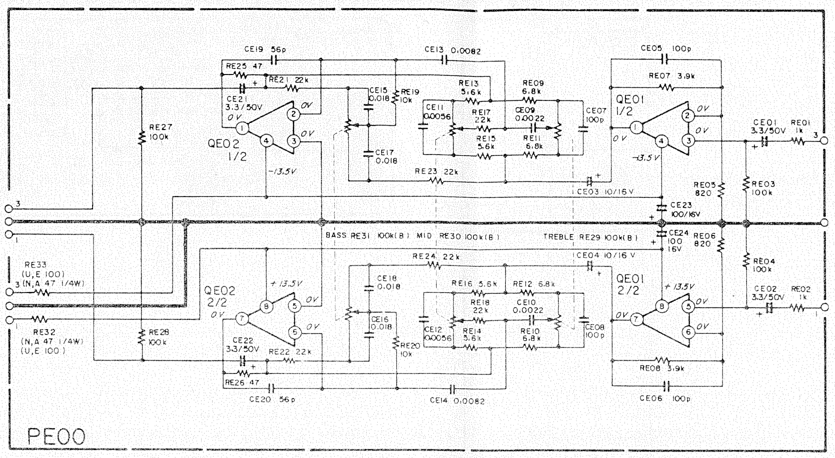

YK123H2860
JU01
G001
JU02
TW-8494V-0
S001
PU00

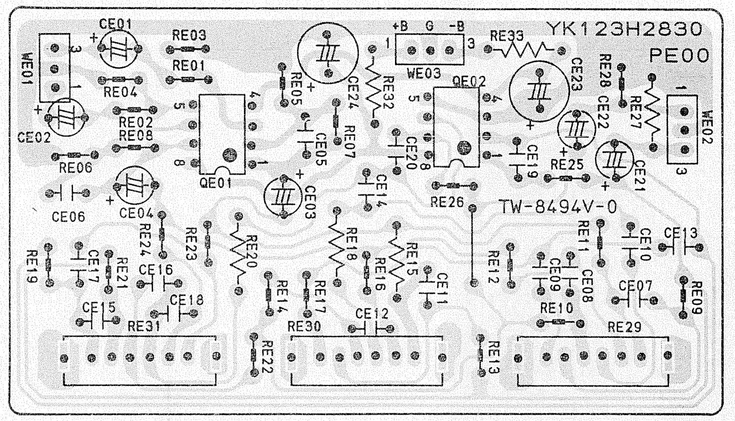
## 10.22 Volume/Balance Assembly (PG00)
## Schematic Diagram and Component Locations (SR520/SR520L)


PG00
JG01
VOLUME
RG01
BALANCE
RG02

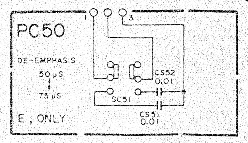

PG00
TW-8494V-0
JG02
WG01
RG02
JG01
RG01

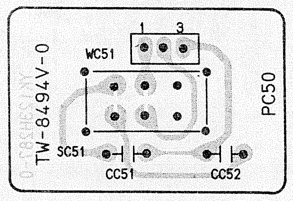
## 10.23 Tone Amp. Assembly (PE00)
## Schematic Diagram and Component Locations (SR520/SR520L)


PE00
QE01 1/2
QE01 2/2
QE02 1/2
QE02 2/2
BASS RE31 100k(B)
MID RE30 100k(B)
TREBLE RE29 100k(B)

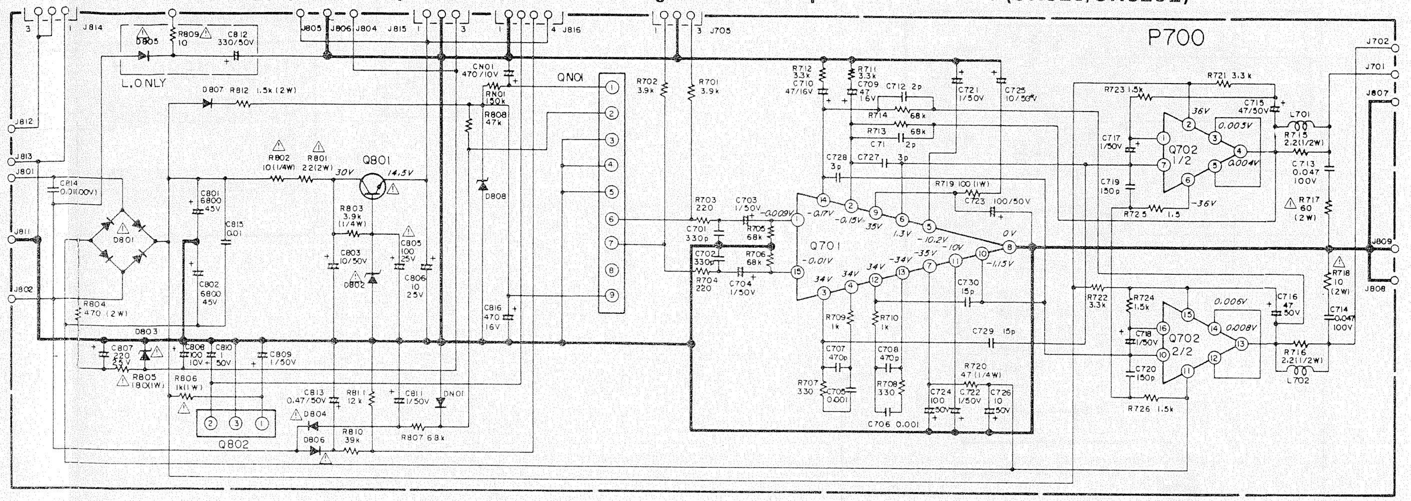

YK123H2830
PE00
TW-8494V-0
+B G -B
WE01
WE02
WE03
QE01
QE02

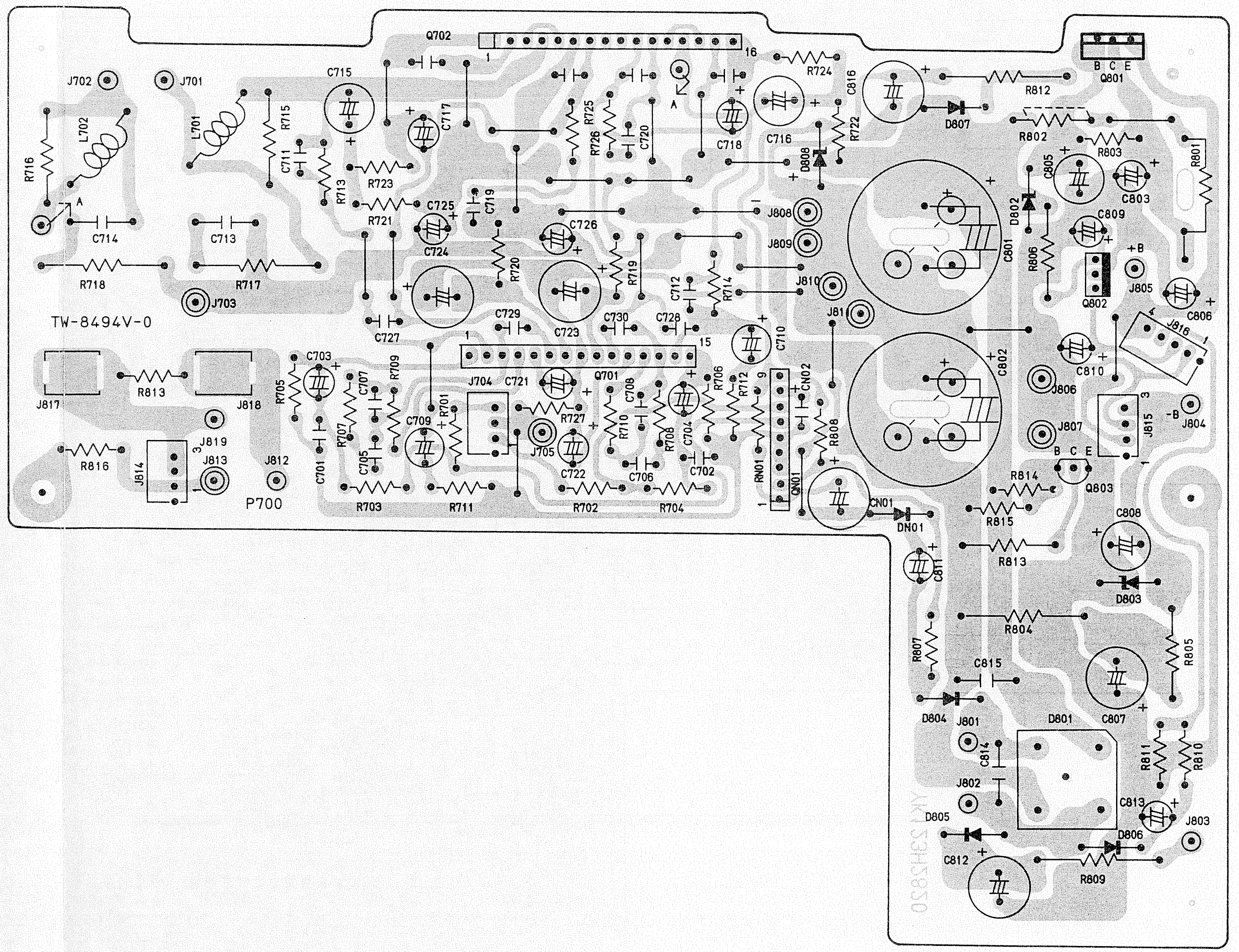
## 10.24 DE-Emphasis Switch Assembly (PC50)
## Schematic Diagram and Component Locations (SR520 ONLY)


PC50
DE-EMPHASIS
50μS
75μS
SC51
CC51
CC52
E, ONLY


WC51
PC50
TW-8494V-0
SC51
CC51
CC52

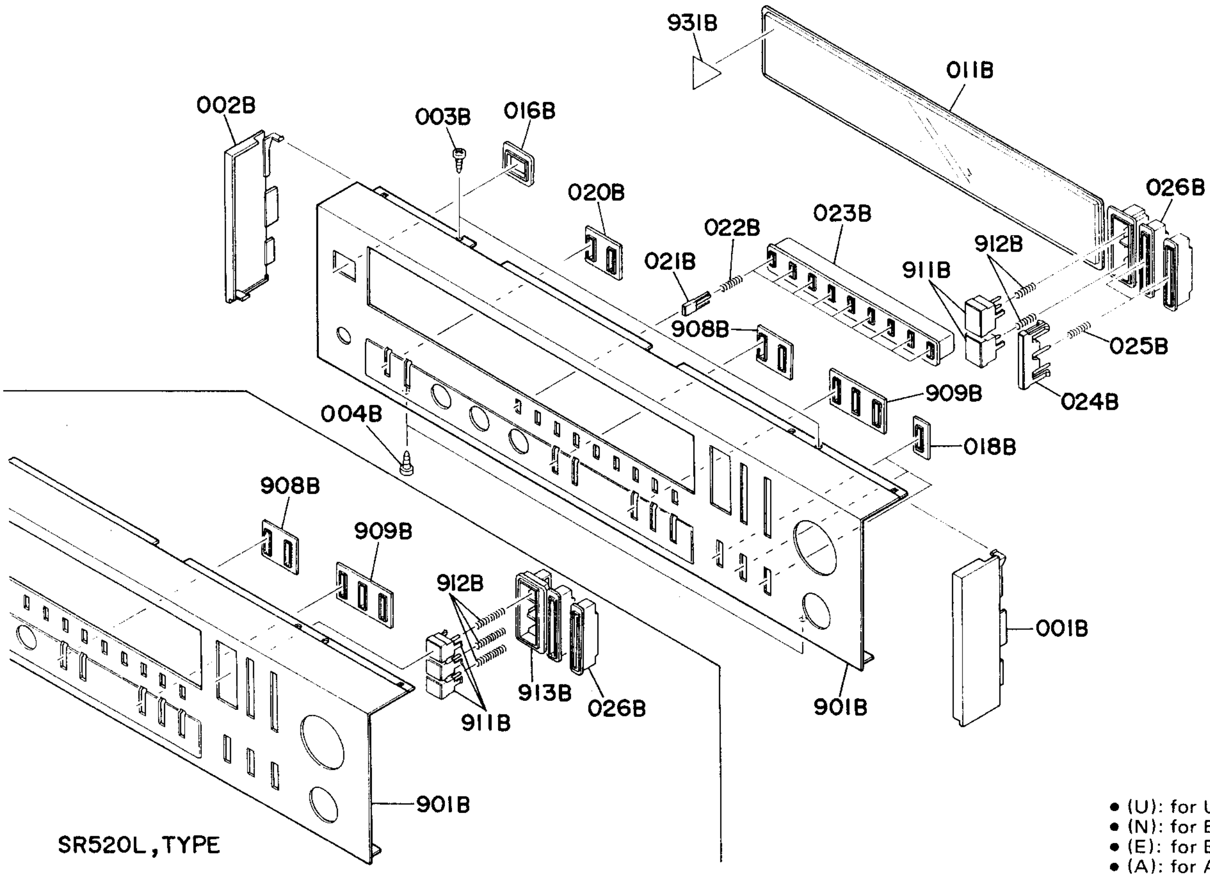
## 10.25 Main/Power Supply Assembly (P700) Schematic Diagram and Component Locations (SR520/SR520L)


P700
L.ONLY
Q801
Q802
Q701
Q702 1/2
Q702 2/2
D801
CN01


P700
TW-8494V-0
Q702
Q701
Q801
Q802
Q803
J701
J702
J703
J804
J805
J806
J807

# 11. EXPLODED VIEW AND PARTS LIST

## [C01-99] Front Panel

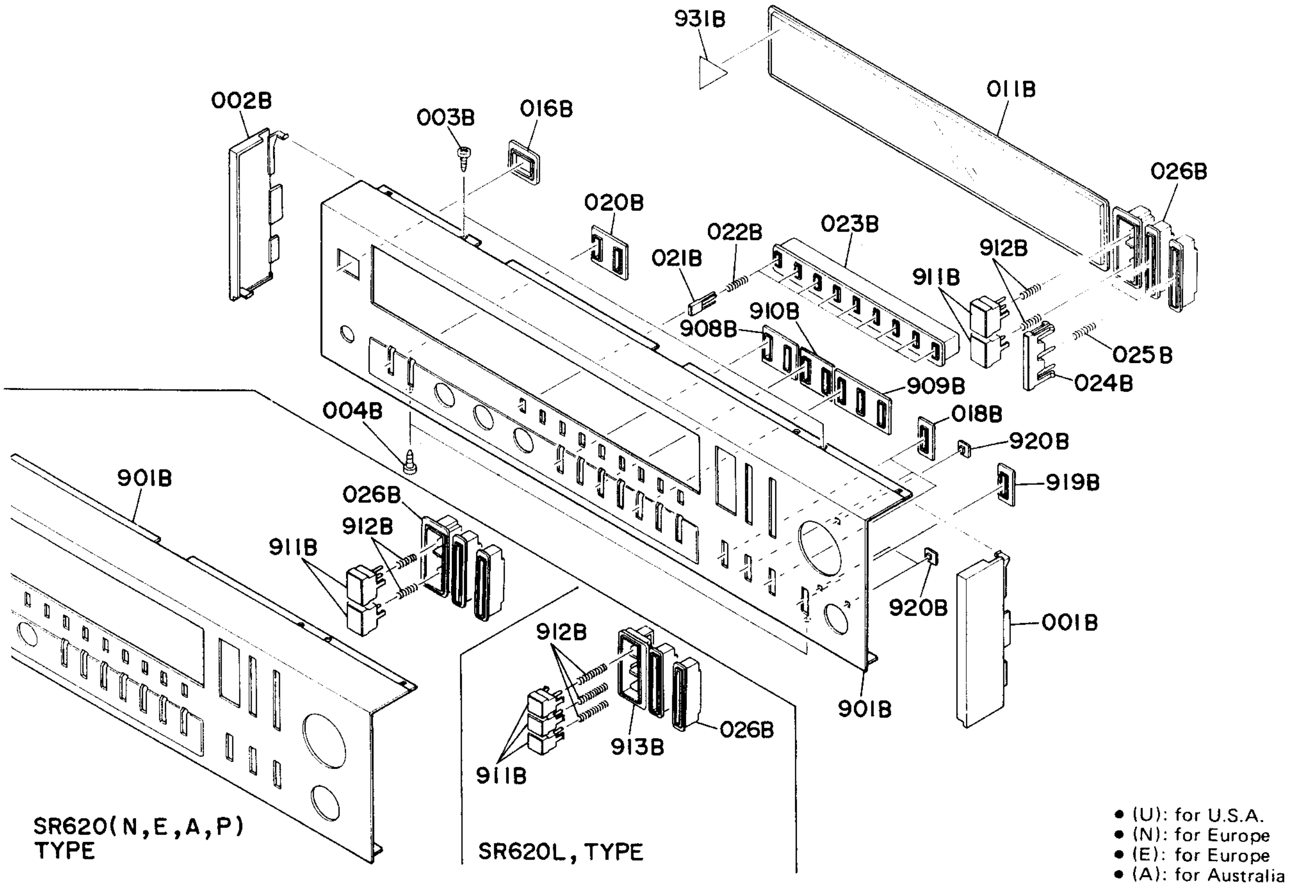


- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | | | | | | | **(SR520, ONLY)** |
| A | 1 | 1 | 1 | 1 | | 123H063400 | Front Panel Assembly |
| 001B | 1 | 1 | 1 | 1 | | 229H067010 | Cap, (Right) |
| 002B | 1 | 1 | 1 | 1 | | 229H067020 | Cap, (Left) |
| 011B | 1 | 1 | 1 | 1 | | 415H158010 | Window |
| 016B | 1 | 1 | 1 | 1 | | 415H259010 | Bushing, Power Switch |
| 018B | 3 | 3 | 3 | 3 | | 208H259010 | Bushing, Function SW. |
| 020B | 1 | 1 | 1 | 1 | | 123H259020 | Bushing, S.P.K SW. |
| 021B | 9 | 9 | 9 | 9 | | 416H154010 | Knob, Memory SW. |
| 022B | 9 | 9 | 9 | 9 | | 416H115020 | Spring, Memory Knob |
| 023B | 1 | 1 | 1 | 1 | | 416H259010 | Bushing, Memory SW. |
| 024B | 2 | 2 | 2 | 2 | | 416H154030 | Knob, Tuning |
| 025B | 2 | 2 | 2 | 2 | | 416H115010 | Spring, Tuning Knob |
| 026B | 1 | 1 | 1 | 1 | | 416H259020 | Bushing, Band SW. |
| 901B | 1 | 1 | 1 | 1 | | 123H063010 | Escutcheon, Front Panel |
| 908B | 1 | 1 | 1 | 1 | | 123H259020 | Bushing, Subsonic SW. |
| 909B | 1 | 1 | 1 | 1 | | 123H259010 | Bushing, Loudness SW. |
| 911B | 2 | 2 | 2 | 2 | | 416H154020 | Knob, Band Switch |
| 912B | 2 | 2 | 2 | 2 | | 416H115010 | Spring, Band Knob |
| 003B | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 004B | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 931B | 1 | | | | | 105H861010 | Label |

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | | | | | | | **(SR520L, ONLY)** |
| A | | 1 | | | | 124H063400 | Front Panel Assembly |
| 001B | | 1 | | | | 229H067010 | Cap, (Right) |
| 002B | | 1 | | | | 229H067020 | Cap, (Left) |
| 011B | | 1 | | | | 415H158010 | Window |
| 016B | | 1 | | | | 415H259010 | Bushing, Power SW. |
| 018B | | 3 | | | | 208H259010 | Bushing, Function SW. |
| 020B | | 1 | | | | 123H259020 | Bushing, Speaker SW. |
| 021B | | 9 | | | | 416H154010 | Knob, Memory SW. |
| 022B | | 9 | | | | 416H115020 | Spring, Memory Knob |
| 023B | | 1 | | | | 416H259010 | Bushing, Memory SW. |
| 024B | | 2 | | | | 416H154030 | Knob, Tuning |
| 025B | | 2 | | | | 416H115010 | Spring, Tuning Knob |
| 026B | | 1 | | | | 416H259020 | Bushing, Band SW. |
| 901B | | 1 | | | | 124H063010 | Escutcheon, Front Panel |
| 908B | | 1 | | | | 123H259020 | Bushing, Subsonic SW. |
| 909B | | 1 | | | | 123H259010 | Bushing, Loudness SW. |
| 911B | | 3 | | | | 420H154010 | Knob, Band Switch |
| 912B | | 3 | | | | 416H115010 | Spring, Band Knob |
| 913B | | 1 | | | | 420H259010 | Bushing, Band SW. |
| 003B | | 2 | | | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 004B | | 2 | | | | 51280308B0 | B.H. Tapped Screw B3 x 8 |

## [C01-99] Front Panel

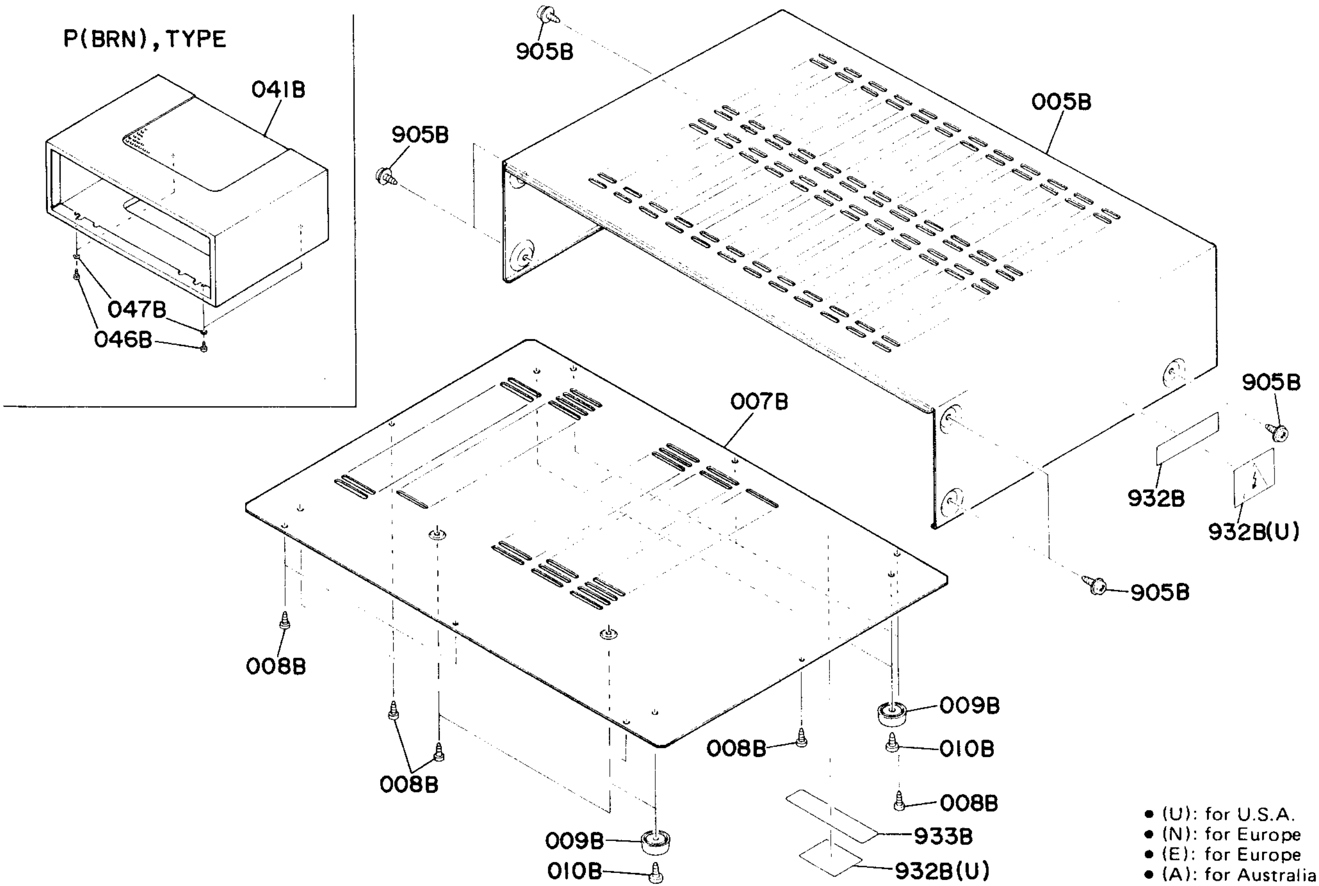


- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **(SR620, ONLY)** |
| A | 1 | | | | | 125H063400 | Front Panel Assembly |
| A1 | | 1 | 1 | 1 | 1 | 125H063410 | Front Panel Assembly |
| 001B | 1 | 1 | 1 | 1 | 1 | 229H067010 | Cap, (Right) |
| 002B | 1 | 1 | 1 | 1 | 1 | 229H067020 | Cap, (Left) |
| 011B | 1 | 1 | 1 | 1 | 1 | 415H158010 | Window |
| 016B | 1 | 1 | 1 | 1 | 1 | 415H259010 | Bushing, Power Switch |
| 018B | 3 | 3 | 3 | 3 | 3 | 208H259010 | Bushing, Function Switch |
| 020B | 1 | 1 | 1 | 1 | 1 | 123H259020 | Bushing, Speaker Switch |
| 021B | 9 | 9 | 9 | 9 | 9 | 416H154010 | Knob, Memory Switch |
| 022B | 9 | 9 | 9 | 9 | 9 | 416H115020 | Spring, Memory Knob |
| 023B | 1 | 1 | 1 | 1 | 1 | 416H259010 | Bushing, Memory Switch |
| 024B | 2 | 2 | 2 | 2 | 2 | 416H154030 | Knob, Tuning Switch |
| 025B | 2 | 2 | 2 | 2 | 2 | 416H115010 | Spring, Tuning Knob |
| 026B | 1 | 1 | 1 | 1 | 1 | 416H259020 | Bushing, Band Switch |
| 901B | 1 | | | | | 125H063020 | Escutcheon, Front Panel |
| 901B | | 1 | 1 | 1 | 1 | 125H063010 | Escutcheon, Front Panel |
| 908B | 1 | 1 | 1 | 1 | 1 | 123H259020 | Bushing, Subsonic SW. |
| 909B | 1 | 1 | 1 | 1 | 1 | 123H259010 | Bushing, Loudness SW. |
| 910B | 1 | 1 | 1 | 1 | 1 | 123H259020 | Bushing, FM Muting SW. |
| 911B | 2 | 2 | 2 | 2 | 2 | 416H154020 | Knob, Band Switch |
| 912B | 2 | 2 | 2 | 2 | 2 | 416H115010 | Spring, Band Knob |
| 919B | 1 | | | | | 208H259010 | Bushing, CX Switch |
| 920B | 3 | | | | | 125H158010 | Window, CX LED |
| 003B | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 004B | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 931B | 1 | | | | | 105H861010 | Label, ESC |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **(SR620L, ONLY)** |
| A | | 1 | | | | 126H063400 | Front Panel Assembly |
| 001B | | 1 | | | | 229H067010 | Cap, (Right) |
| 002B | | 1 | | | | 229H067020 | Cap, (Left) |
| 011B | | 1 | | | | 415H158010 | Window |
| 016B | | 1 | | | | 415H259010 | Bushing, Power SW. |
| 018B | | 3 | | | | 208H259010 | Bushing, Function SW. |
| 020B | | 1 | | | | 123H259020 | Bushing, Speaker SW. |
| 021B | | 9 | | | | 416H154010 | Knob, Memory SW. |
| 022B | | 9 | | | | 416H115020 | Spring, Memory Knob |
| 023B | | 1 | | | | 416H259010 | Bushing, Memory SW. |
| 024B | | 2 | | | | 416H154030 | Knob, Tuning |
| 025B | | 2 | | | | 416H115010 | Spring, Tuning Knob |
| 026B | | 1 | | | | 416H259020 | Bushing, Band SW. |
| 901B | | 1 | | | | 126H063010 | Escutcheon, Front Panel |
| 908B | | 1 | | | | 123H259020 | Bushing, Subsonic SW. |
| 909B | | 1 | | | | 123H259010 | Bushing, Loudness SW. |
| 910B | | 1 | | | | 123H259020 | Bushing, FM Muting SW. |
| 911B | | 3 | | | | 420H154010 | Knob, Band SW. |
| 912B | | 3 | | | | 416H115010 | Spring, Band SW. |
| 913B | | 1 | | | | 420H259010 | Bushing, Band SW. |
| 003B | | 2 | | | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 004B | | 2 | | | | 51280308B0 | B.H. Tapped Screw B3 x 8 |

## [C02-99] LID (Top and Bottom Cover)

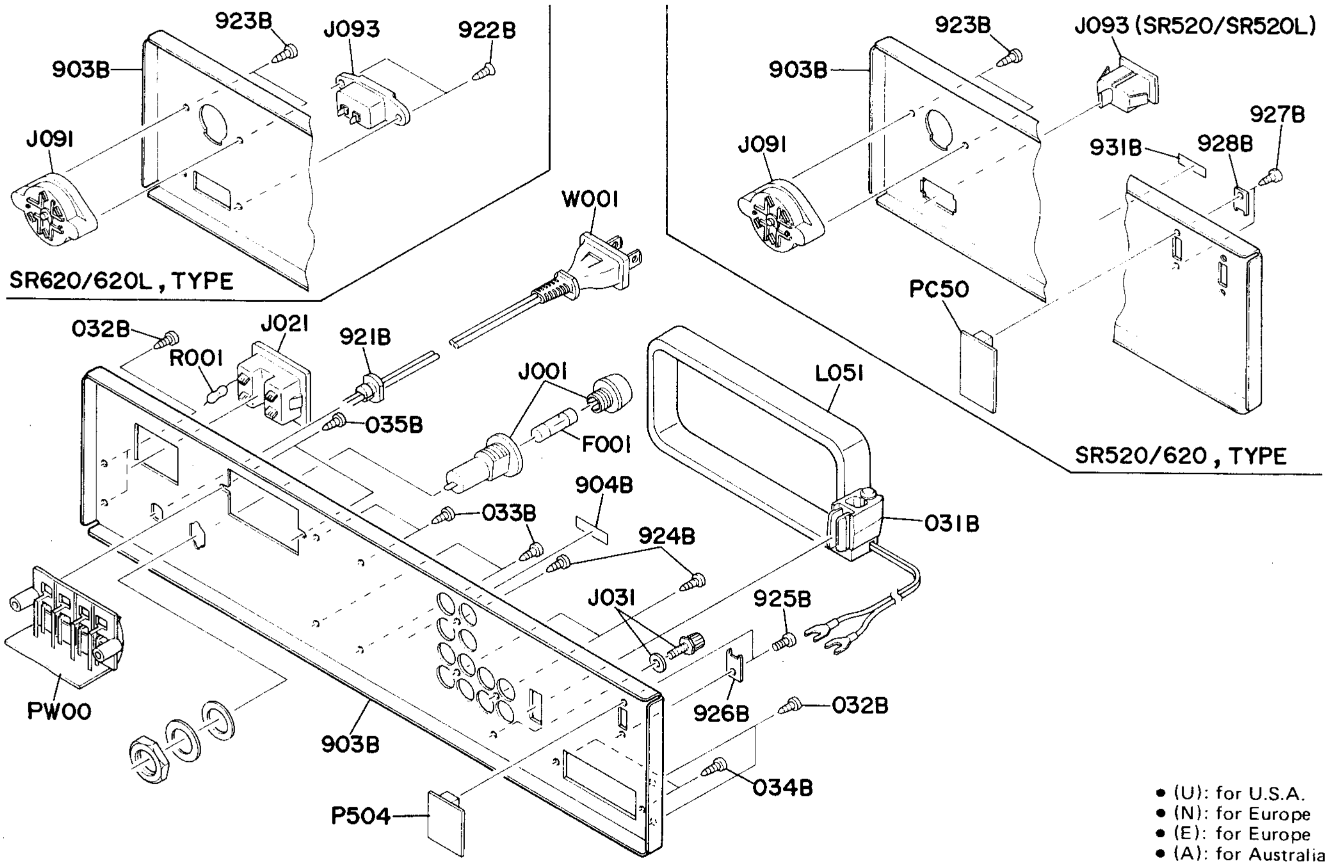

P(BRN), TYPE
041B
047B
046B
905B
905B
005B
905B
007B
932B
932B(U)
905B
008B
009B
010B
008B
008B
008B
009B
010B
933B
932B(U)

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 005B | 1 | 1 | 1 | 1 | 1 | 123H257010 | Lid, Top Cover |
| 007B | 1 | 1 | 1 | 1 | 1 | 123H257020 | Lid, Bottom Cover |
| 008B | 10 | 10 | 10 | 10 | 10 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 009B | 4 | 4 | 4 | 4 | 4 | 416H057010 | Leg EXCEPT "P(BRN)" |
| 010B | 4 | 4 | 4 | 4 | 4 | 51280408U0 | B.H. Tapped Screw B4 x 8 EXCEPT "P(BRN)" |
| 905B | 6 | 6 | 6 | 6 | 6 | 51260408U0 | B.T. Screw B4 x 8 |
| 932B | 2 | | | | | 117H861010 | Label, Caution |
| 932B | | 1 | 1 | 1 | 1 | 2932861110 | Label, Caution |
| 933B | | 1 | 1 | 1 | 1 | 2578861010 | Label, Caution |

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 041B | | | | | 1 | 125H064500 | Wood Case "P(BRN)" only |
| 046B | | | | | 4 | 51280320U0 | B.H. Tapped Screw B3 x 20 "P(BRN)" only |
| 047B | | | | | 4 | 54110149A0 | Flat Washer, L "P(BRN)" only |

## [C03-99] Rear Panel

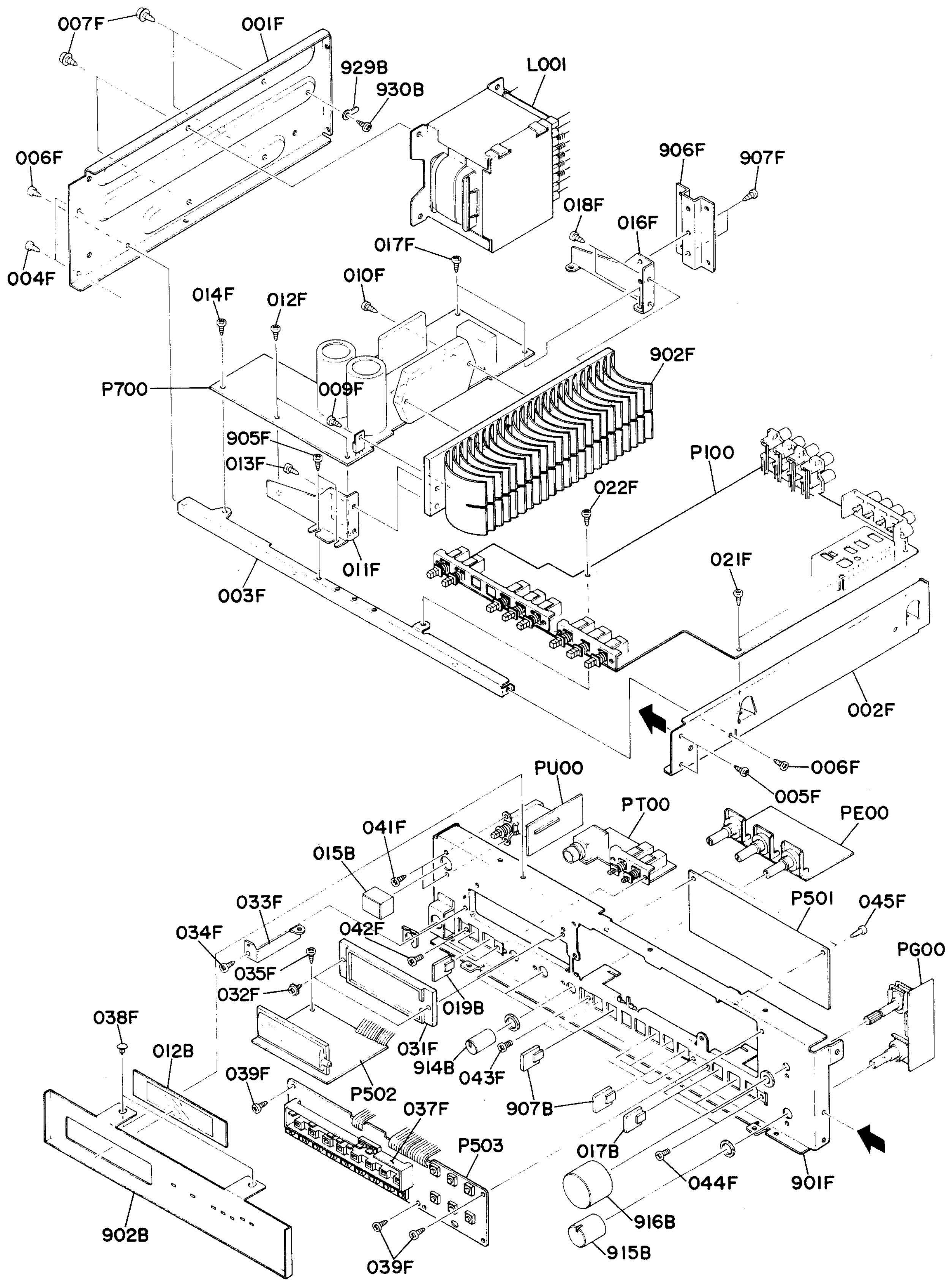

923B
J093
922B
903B
J091
SR620/620L, TYPE
W001
923B
J093 (SR520/SR520L)
903B
927B
931B
928B
J091
PC50
032B
J021
R001
921B
J001
L051
035B
F001
904B
033B
924B
031B
J031
925B
PW00
926B
032B
903B
034B
P504
SR520/620, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 031B | 1 | 1 | 1 | 1 | 1 | 408H271010 | Holder, Loop Antenna |
| 032B | 4 | 4 | 4 | 4 | 4 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 033B | 4 | 4 | 4 | 4 | 4 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 034B | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 035B | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 904B | 1 | 1 | 1 | 1 | 1 | 2112265010 | Indicator, Serial No. |
| 923B |  | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 931B |  | 1 | 1 | 1 | 1 | 4581861010 | Label, Made in Japan |
| ⚠J001 |  | 1 | 1 | 1 |  | YJ08000290 | Jack, Fuse Holder |
| J031 | 1 | 1 | 1 | 1 | 1 | YL03010250 | Terminal, GND |
| ⚠J091 |  | 1 |  | 1 |  | BY05030040 | Voltage Selector |
| L051 | 1 | 1 | 1 | 1 | 1 | LA00015020 | Antenna, Loop |
|  |  |  |  |  |  |  | **(SR520, ONLY)** |
| 903B | 1 |  |  |  |  | 123H160220 | Bracket, Rear Panel |
| 903B |  | 1 |  | 1 |  | 123H160210 | Bracket, Rear Panel |
| 903B |  |  | 1 |  |  | 123H160230 | Bracket, Rear Panel |
|  |  |  |  |  |  |  | **(SR520L, ONLY)** |
| 903B |  | 1 |  |  |  | 124H160210 | Bracket, Rear Panel |
|  |  |  |  |  |  |  | **(SR520/SR520L)** |
| 924B | 2 | 2 | 2 | 2 |  | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| ⚠F001 |  | 1 | 1 | 1 |  | FS10080800 | Fuse, 0.8A 250V |
| ⚠J093 |  | 1 | 1 | 1 |  | YP04000580 | Plug, AC Inlet |

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  | **(SR520/SR620)** |
| 921B | 1 |  |  |  |  | 1455259090 | Bushing, AC Power Cord |
| 925B | 2 | 2 | 2 | 2 | 2 | 51102604A0 | B.H.M. Screw B2.6 x 4 |
| 926B | 1 | 1 | 1 | 1 | 1 | 123H114010 | Stopper, Scan Step SW. |
| 927B |  |  | 2 |  | 2 | 51102604A0 | B.H.M. Screw B2.6 x 4 |
| 928B |  |  | 1 |  | 1 | 123H114010 | Stopper, DE-Emphasis SW. |
| ⚠F001 | 1 |  |  |  |  | FS10300500 | Fuse, 3A 250V |
| ⚠J001 | 1 |  |  |  | 1 | YJ08000300 | Jack, Fuse Holder |
| ⚠J021 | 1 |  |  |  | 1 | YJ04001070 | Jack, AC Outlet |
| ⚠J091 |  |  | 1 |  | 1 | BY05080040 | Voltage Selector |
| ⚠W001 | 1 |  |  |  |  | YC01800260 | A.C. Power Cord |
|  |  |  |  |  |  |  | **(SR620, ONLY)** |
| 903B | 1 |  |  |  |  | 125H160220 | Bracket, Rear Panel |
| 903B |  | 1 |  | 1 |  | 125H160210 | Bracket, Rear Panel |
| 903B |  |  | 1 |  |  | 125H160230 | Bracket, Rear Panel |
| 903B |  |  |  |  | 1 | 125H160240 | Bracket, Rear Panel |
| ⚠F001 |  | 1 | 1 | 1 |  | FS10100800 | Fuse, 1A 250V |
| ⚠F001 |  |  |  |  | 1 | FS10300600 | Fuse, 3A 250V |
| ⚠R001 | 1 |  |  |  |  | RC10225920 | Resistor, 2.2MΩ ±10% ½W |
|  |  |  |  |  |  |  | **(SR620/SR620L)** |
| 922B |  | 2 | 2 | 2 | 2 | 51870308U0 | O.C.H. Tapped Screw O3 x 8 |
| 924B | 3 | 3 | 3 | 3 | 3 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| ⚠J093 |  | 1 | 1 | 1 |  | YP04000610 | Plug, AC Inlet |
|  |  |  |  |  |  |  | **(SR620L, ONLY)** |
| 903B |  | 1 |  |  |  | 126H160210 | Bracket, Rear Panel |
| ⚠F001 |  | 1 |  |  |  | FS10100800 | Fuse, 1A 250V |

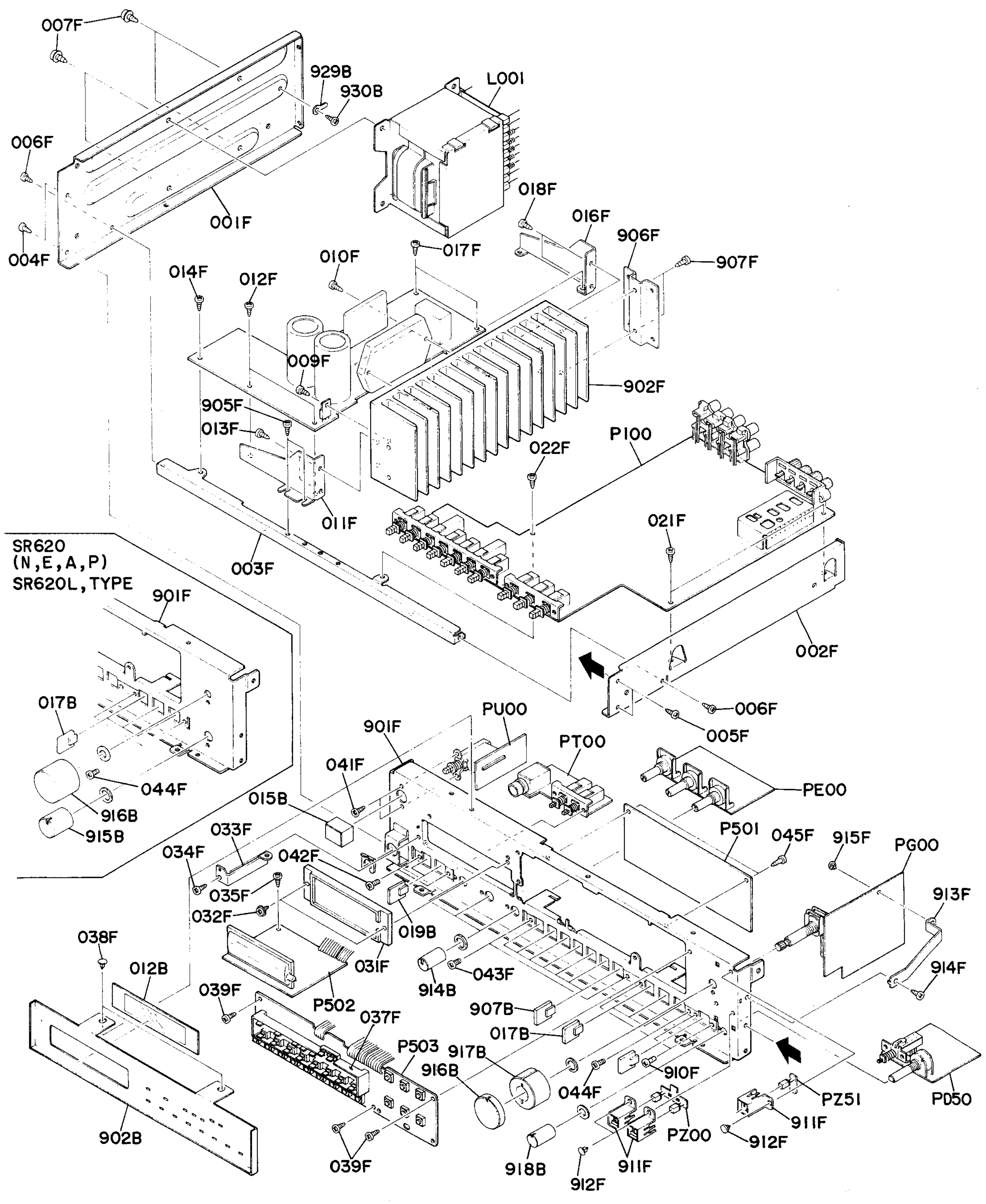
## [P01-99] Front Chassis and General Parts


007F
001F
929B
930B
L001
006F
906F
907F
018F
016F
017F
004F
010F
014F
012F
902F
P700
009F
905F
013F
P100
022F
011F
021F
003F
002F
006F
PU00
005F
PT00
PE00
041F
015B
033F
P501
045F
034F
042F
PG00
035F
032F
019B
038F
031F
012B
914B
043F
039F
P502
907B
037F
P503
017B
044F
901F
916B
902B
915B
039F

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY U | Q'TY N | Q'TY E | Q'TY A | Q'TY P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | | | | | | | **(SR520/SR520L)** |
| 012B | 1 | 1 | 1 | 1 | | 408H158020 | Window, Digitron |
| 015B | 1 | 1 | 1 | 1 | | 415H154010 | Knob, Power Switch |
| 017B | 3 | 3 | 3 | 3 | | 226H154140 | Knob, Function Switch |
| 019B | 2 | 2 | 2 | 2 | | 226H154140 | Knob, Speaker Switch |
| 902B | 1 | 1 | 1 | 1 | | 125H302010 | Dial |
| 907B | 5 | 5 | 5 | 5 | | 226H154140 | Knob, Push Switch |
| 914B | 3 | | | | | 123H154040 | Knob, Tone Control |
| 914B | | 3 | 3 | 3 | | 123H154010 | Knob, Tone Control |
| 915B | 1 | | | | | 123H154050 | Knob, Balance |
| 915B | | 1 | 1 | 1 | | 123H154020 | Knob, Balance |
| 916B | 1 | | | | | 123H154060 | Knob, Volume |
| 916B | | 1 | 1 | 1 | | 123H154030 | Knob, Volume |
| 929B | 1 | | | | | 62030039W0 | Lug |
| 930B | 1 | | | | | 51280306B0 | B.H. Tapped Screw B3 x 6 |
| 001F | 1 | 1 | 1 | 1 | | 123H126010 | Stay, (L) |
| 002F | 1 | 1 | 1 | 1 | | 123H126020 | Stay, (R) |
| 003F | 1 | 1 | 1 | 1 | | 123H126030 | Stay, Center |
| 004F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 005F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 006F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 007F | 4 | 4 | 4 | 4 | | 51260408U0 | B.T. Screw B4 x 8 |
| 009F | 1 | 1 | 1 | 1 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 010F | 2 | 2 | 2 | 2 | | 51780315B0 | Fin Neck B.T |
| 011F | 1 | 1 | 1 | 1 | | 123H160020 | Bracket, Front |
| 012F | 2 | 2 | 2 | 2 | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 013F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 014F | 1 | 1 | 1 | 1 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 016F | 1 | 1 | 1 | 1 | | 123H160030 | Bracket, Rear |
| 017F | 2 | 2 | 2 | 2 | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 018F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 021F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 022F | 1 | 1 | 1 | 1 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 031F | 1 | 1 | 1 | 1 | | 416H259040 | Bushing |
| 032F | 2 | 2 | 2 | 2 | | 51260308B0 | B.T. Screw B3 x 8 |
| 033F | 1 | 1 | 1 | 1 | | 123H160010 | Bracket, Digitron |
| 034F | 1 | 1 | 1 | 1 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 035F | 1 | 1 | 1 | 1 | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 037F | 1 | 1 | 1 | 1 | | 123H051010 | Guide, LED |
| 038F | 2 | 2 | 2 | 2 | | 2276005050 | Clamper |
| 039F | 3 | 3 | 3 | 3 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 041F | 2 | 2 | 2 | 2 | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 042F | 2 | 2 | 2 | 2 | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 043F | 2 | 2 | 2 | 2 | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 044F | 2 | 2 | 2 | 2 | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 045F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 901F | 1 | 1 | 1 | 1 | | 123H105010 | Chassis, Front |
| 902F | 1 | 1 | 1 | 1 | | 123H267010 | Heatsink |
| 905F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 906F | 1 | 1 | 1 | 1 | | 123H160040 | Bracket, Rear |
| 907F | 2 | 2 | 2 | 2 | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| ⚠L001 | 1 | | | | | TS17625010 | Power Transformer |
| ⚠L001 | | 1 | | 1 | | TS17626020 | Power Transformer |
| ⚠L001 | | | 1 | | | TS17626030 | Power Transformer |

## [P01-99] Front Chassis and General Parts

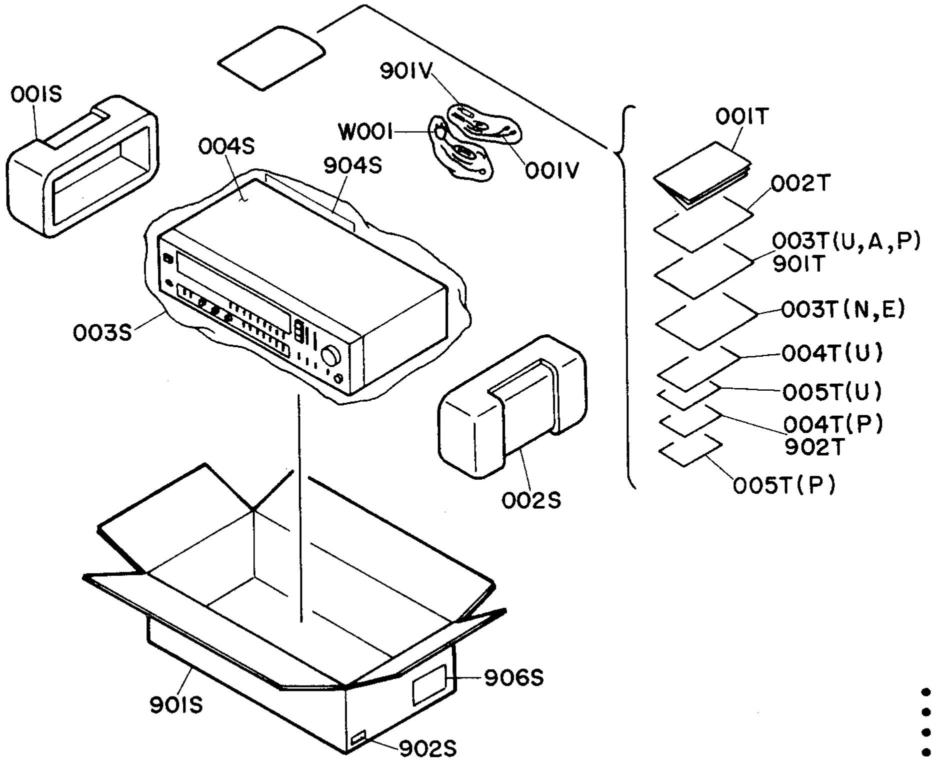

007F
929B
930B
L001
006F
018F
016F
001F
906F
004F
010F
017F
907F
014F
012F
009F
902F
905F
013F
P100
022F
011F
021F
SR620
(N,E,A,P)
SR620L,TYPE
003F
901F
002F
017B
006F
005F
PU00
901F
PT00
041F
044F
PE00
015B
916B
915B
033F
P501
045F
915F
PG00
034F
042F
035F
913F
032F
019B
038F
031F
043F
914F
012B
039F
914B
P502
907B
037F
017B
P503
917B
916B
910F
044F
PZ51
911F
P050
PZ00
912F
902B
039F
918B
911F
912F

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **(SR620/SR620L)** |
| 012B | 1 | 1 | 1 | 1 | 1 | 408H158020 | Window, Digitron |
| 015B | 1 | 1 | 1 | 1 | 1 | 415H154010 | Knob, Power Switch |
| 017B | 3 | 3 | 3 | 3 | 3 | 226H154140 | Knob, Function Switch |
| 019B | 2 | 2 | 2 | 2 | 2 | 226H154140 | Knob, Speaker Switch |
| 902B | 1 | 1 | 1 | 1 | 1 | 125H302010 | Dial |
| 907B | 7 | 7 | 7 | 7 | 7 | 226H154140 | Knob, Push Switch |
| 914B | 3 | | | | 3 | 123H154040 | Knob, Tone Control |
| 914B | | 3 | 3 | 3 | | 123H154010 | Knob, Tone Control |
| 915B | 1 | | | | | 123H154040 | Knob, Input Level |
| 915B | | 1 | 1 | 1 | | 123H154020 | Knob, Balance |
| 915B | | | | | 1 | 123H154050 | Knob, Balance |
| 916B | 1 | | | | | 102T154050 | Knob, Volume (L) |
| 916B | | 1 | 1 | 1 | 1 | 123H154030 | Knob, Volume |
| 916B | | | | | 1 | 123H154060 | Knob, Volume |
| 917B | 1 | | | | | 102T154070 | Knob, Volume (R) |
| 918B | 1 | | | | | 226H154140 | Knob, CX Switch |
| 929B | 1 | | | | | 62030039W0 | Lug |
| 930B | 1 | | | | | 51280306B0 | B.H. Tapped Screw B3 x 6 |
| 001F | 1 | 1 | 1 | 1 | 1 | 123H126010 | Stay, (L) |
| 002F | 1 | 1 | 1 | 1 | 1 | 123H126020 | Stay, (R) |
| 003F | 1 | 1 | 1 | 1 | 1 | 123H126030 | Stay, Center |
| 004F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 005F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 006F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 007F | 4 | 4 | 4 | 4 | 4 | 51260408B0 | B.T. Screw B4 x 8 |
| 009F | 1 | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 010F | 2 | 2 | 2 | 2 | 2 | 51780315B0 | Fin Neck B.T |
| 011F | 1 | 1 | 1 | 1 | 1 | 123H160020 | Bracket, Front |
| 012F | 2 | 2 | 2 | 2 | 2 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 013F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 014F | 1 | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 016F | 1 | 1 | 1 | 1 | 1 | 123H160030 | Bracket, Rear |
| 017F | 2 | 2 | 2 | 2 | 2 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 018F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 021F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 022F | 1 | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 031F | 1 | 1 | 1 | 1 | 1 | 416H259040 | Bushing |
| 032F | 2 | 2 | 2 | 2 | 2 | 51260308B0 | B.T. Screw B3 x 8 |
| 033F | 1 | 1 | 1 | 1 | 1 | 123H160010 | Bracket, Digitron |
| 034F | 1 | 1 | 1 | 1 | 1 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 035F | 1 | 1 | 1 | 1 | 1 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 037F | 1 | 1 | 1 | 1 | 1 | 123H051010 | Guide, LED |
| 038F | 2 | 2 | 2 | 2 | 2 | 2276005050 | Clamper |
| 039F | 3 | 3 | 3 | 3 | 3 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 041F | 2 | 2 | 2 | 2 | 2 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 042F | 2 | 2 | 2 | 2 | 2 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 043F | 2 | 2 | 2 | 2 | 2 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 044F | 2 | 2 | 2 | 2 | 2 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 045F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| 901F | 1 | | | | | 125H105010 | Chassis, Front |
| 901F | | 1 | 1 | 1 | 1 | 123H105010 | Chassis, Front |
| 902F | 1 | 1 | 1 | 1 | 1 | 125H267010 | Heatsink |
| 905F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 906F | 1 | 1 | 1 | 1 | 1 | 123H160040 | Bracket, Rear |
| 907F | 2 | 2 | 2 | 2 | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 910F | 2 | | | | | 51100306A9 | B.H.M. Screw B3 x 6 |
| 911F | 3 | | | | | 125H118010 | Spacer, CX LED |
| 912F | 3 | | | | | 2276005050 | Clamper |
| 913F | 1 | | | | | 125H160010 | Bracket, CX PWB |
| 914F | 1 | | | | | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 915F | 1 | | | | | 2276005050 | Clamper |
| ⚠L001 | 1 | | | | | TS17626010 | Power Transformer |
| ⚠L001 | | 1 | | 1 | | TS17626020 | Power Transformer |
| ⚠L001 | | | 1 | | 1 | TS17626030 | Power Transformer |

## [H01-99] Packing Material



- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY |  |  |  |  | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  | U | N | E | A | P |  |  |
| 001S | 1 | 1 | 1 | 1 | 1 | 229H809010 | Cushion, (L) |
| 002S | 1 | 1 | 1 | 1 | 1 | 229H809020 | Cushion, (R) |
| 003S | 1 | 1 | 1 | 1 | 1 | 9090909030 | Polyethylene Sheet |
| 004S | 1 | 1 | 1 | 1 | 1 | 2918107350 | Sheet |
| 901S | 1 |  |  |  |  | 123H801020 | Packing Case, (SR520) |
| 901S |  | 1 | 1 | 1 |  | 123H801010 | Packing Case, (SR520) |
| 901S |  | 1 |  |  |  | 124H801010 | Packing Case, (SR520L) |
| 901S | 1 |  |  |  |  | 125H801020 | Packing Case, (SR620) |
| 901S |  | 1 | 1 | 1 |  | 125H801010 | Packing Case, (SR620) |
| 901S |  |  |  |  | 1 | 125H801040 | Packing Case, (SR620) |
| 901S |  | 1 |  |  |  | 126H801010 | Packing Case, (SR620L) |
| 902S | 2 |  |  |  |  | 9526019020 | Serial No. Card, (SR520/SR620) |
| 902S |  | 4 | 4 |  |  | 9526019060 | Serial No. Card, (SR520L/SR620L) |
| 902S |  |  |  | 4 |  | 9526019030 | Serial No. Card, (SR520/SR620) |
| 902S |  |  |  |  | 3 | 9526019050 | Serial No. Card, (SR620) |
| 904S | 1 |  |  |  | 1 | 2918107370 | Sheet, (SR520/SR620) |
| 906S | 2 |  |  |  |  | 9510901020 | Label, (SR520/SR620) |
| 001T | 1 |  |  |  |  | 123H851210 | Instructions, (SR520/SR620) |
| 001T |  | 1 | 1 | 1 |  | 123H851310 | Instructions, (SR520/SR520L) |
| 001T |  | 1 | 1 | 1 | 1 | 125H851310 | Instructions, (SR620/SR620L) |
| 002T | 1 |  |  |  |  | 123H851220 | Instructions, Spec; (SR520/SR620) |
| 002T |  | 1 | 1 | 1 |  | 123H851320 | Instructions, Spec; (SR520/SR520L) |
| 002T |  | 1 | 1 | 1 | 1 | 125H851320 | Instructions, Spec; (SR620/SR620L) |
| 003T | 1 |  |  |  |  | 103H854010 | Guarantee Cord, (SR520/SR620) |

| REF. DESIG. | Q'TY |  |  |  |  | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  | U | N | E | A | P |  |  |
| 003T |  | 1 | 1 |  |  | 123H856010 | Circuit Diagram, (SR520) |
| 003T |  | 1 |  |  |  | 124H856010 | Circuit Diagram, (SR520L) |
| 003T |  | 1 | 1 |  |  | 125H856010 | Circuit Diagram, (SR620) |
| 003T |  | 1 |  |  |  | 126H856010 | Circuit Diagram, (SR620L) |
| 003T |  |  |  | 1 |  | 9631000090 | Guarantee Card |
| 003T |  |  |  |  | 1 | 2818854010 | Guarantee Card, (SR620) |
| 004T | 1 |  |  |  |  | 2225813010 | Envelope, (SR520/SR620) |
| 004T |  |  |  |  | 1 | 9650000010 | S. Station Card, (SR620) |
| 005T | 1 |  |  |  |  | 9560000100 | Hang Tag, (SR520/SR620) |
| 005T |  |  |  |  | 1 | 3435851210 | Instruction, (SR620) |
| 901T | 1 |  |  |  |  | 2818854040 | Guarantee Card for Canada, (SR520/SR620) |
| 902T | 1 |  |  |  |  | 9650000050 | S. Station Card for Canada, (SR520/SR620) |
| 001S |  |  |  |  | 1 | 125H801030 | Packing Case P(BRN) only |
| 002S |  |  |  |  | 2 | 125H809010 | Cushion P(BRN) only |
| 004S |  |  |  |  | 3 | 9526019050 | Serial No, Card P(BRN) only |
| 005S |  |  |  |  | 1 | 2918107370 | Sheet P(BRN) only |
| 006S |  |  |  |  | 1 | 9090909030 | Polyethy Sheet P(BRN) only |
| 007S |  |  |  |  | 1 | 2918107350 | Sheet P(BRN) only |
| 001V | 1 | 1 | 1 | 1 | 1 | ZA02000070 | EXT. Antenna |
| 901V |  |  |  |  | 1 | YJ04000240 | Jack |
| ⚠W001 |  | 1 | 1 |  |  | ZC01805010 | A.C. Power Cord (SR520/SR520L) |
| ⚠W001 |  | 1 | 1 |  |  | ZC01805030 | A.C. Power Cord (SR620/SR620L) |
| ⚠W001 |  |  |  | 1 |  | ZC02006020 | A.C. Power Cord (SR520) |
| ⚠W001 |  |  |  | 1 |  | ZC02006030 | A.C. Power Cord (SR620) |
| ⚠W001 |  |  |  |  | 1 | YC01800190 | A.C. Power Cord |

## 12. ELECTRICAL PARTS LIST

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **(SR520, ONLY)**<br>**P100-TUNER/PHONO CIRCUIT BOARD** |
| P100 | 1 | 1 | 1 | 1 | | YK123H2810 | P.W. Board, Tuner/Phone |
| | 1 | | | | | ZZ123H2810 | P.W. Board Assembly |
| | | 1 | 1 | 1 | | ZZ123H8810 | P.W. Board Assembly |
| | | | | | | | **(SR520L, ONLY)** |
| P100 | | 1 | | | | YK123H2810 | P.W. Board, Tuner/Phono |
| | | 1 | | | | ZZ124H8810 | P.W. Board Assembly |
| | | | | | | | **(SR620, ONLY)** |
| P100 | 1 | 1 | 1 | 1 | 1 | YK125H1910 | P.W. Board, Tuner/Phono |
| | 1 | | | | 1 | ZZ125H1910 | P.W. Board Assembly |
| | | 1 | 1 | 1 | | ZZ125H8910 | P.W. Board Assembly |
| | | | | | | | **(SR620L, ONLY)** |
| P100 | | 1 | | | | YK125H1910 | P.W. Board, Tuner/Phono |
| | | 1 | | | | ZZ126H8910 | P.W. Board Assembly |
| | | | | | | | **P100-CAPACITORS** |
| CA01 | 1 | 1 | 1 | 1 | 1 | DF55471090 | Film 470pF ±5% |
| CA02 | 1 | 1 | 1 | 1 | 1 | DD15220370 | Ceramic 22pF ±5% |
| CA03 | | 1 | | | | DF55151090 | Film 150pF ±5%, [L] |
| CA04 | | 1 | | | | DD15680370 | Ceramic 68pF ±5%, [L] |
| CA05 | 1 | 1 | 1 | 1 | 1 | CT12000090 | Trimming 20pF |
| CA05 | | 1 | | | | CT21600020 | Trimming 16pF, [L] |
| CA08 | | 1 | | | | DD15270370 | Ceramic 27pF, [L] |
| CA09 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| CA10 | 1 | 1 | 1 | 1 | 1 | DD10050370 | Ceramic 5pF ±0.25pF |
| CA11 | 1 | 1 | 1 | 1 | 1 | DK16391300 | Ceramic 390pF ±10% |
| CA12 | 1 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04µF +80%−20% |
| CA13 | 1 | 1 | 1 | 1 | 1 | DK16102300 | Ceramic 1000pF ±10% |
| CA14 | 1 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04µF +80%−20% |
| CA15 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| CA16 | 1 | 1 | 1 | 1 | 1 | DK18223320 | Ceramic 0.022µF +80%−20% |
| CA17 | 1 | 1 | 1 | 1 | 1 | DD15470370 | Ceramic 47pF ±5% |
| CA18 | 1 | 1 | 1 | 1 | 1 | DK18223320 | Ceramic 0.022µF +80%−20% |
| CA19 | 1 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04µF +80%−20% |
| CA20 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| CA21 | 1 | 1 | 1 | 1 | 1 | DK18223320 | Ceramic 0.022µF +80%−20% |
| CA22 | 1 | 1 | 1 | 1 | 1 | DK16102300 | Ceramic 1000pF ±10% |
| CA23 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| CA24 | 1 | 1 | 1 | 1 | 1 | DK18473320 | Ceramic 0.047µF +80%−20% |
| CA25 | 1 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04µF +80%−20% |
| CA26 | 1 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47µF 50V |
| CA27 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| CA28 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| CA29 | 1 | 1 | 1 | 1 | 1 | DK18223320 | Ceramic 0.022µF +80%−20% |
| CA30 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| CA31 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100µF 16V |
| CA32 | 1 | 1 | 1 | 1 | 1 | DF15273300 | Film 0.027µF ±5% |
| CA33 | 1 | | | | 1 | DF15472300 | Film 4700pF ±5% |
| CA33 | | 1 | 1 | 1 | | DF15222300 | Film 2700pF ±5% |
| CA34 | 1 | 1 | 1 | 1 | 1 | DF15473300 | Film 0.047µF ±5% |
| CA35 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| CA36 | 1 | 1 | 1 | 1 | 1 | DK16331300 | Ceramic 330pF ±10% |
| CA37 | 1 | 1 | 1 | 1 | 1 | DK16102300 | Ceramic 1000pF ±10% |
| CA38 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20%<br>(SR520/SR620) |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| CB01 | | 1 | | | | EA47405030 | Elect 0.47µF 50V, [L] |
| CB02 | | 1 | | | | EA47405030 | Elect 0.47µF 50V, [L] |
| CS01 | 1 | 1 | 1 | 1 | 1 | DF15473300 | Film 0.047µF ±5% |
| CS02 | 1 | 1 | 1 | 1 | 1 | DF15473300 | Film 0.047µF ±5% |
| CS03 | 1 | 1 | 1 | 1 | 1 | DK16681300 | Ceramic 680pF ±10% |
| CS04 | 1 | 1 | 1 | 1 | 1 | DK16681300 | Ceramic 680pF ±10% |
| CS05 | 1 | 1 | 1 | 1 | | EA10405030 | Elect 0.1µF 50V [5] |
| CS05 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V [6] |
| CS06 | 1 | 1 | 1 | 1 | | EA10405030 | Elect 0.1µF 50V [5] |
| CS06 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V [6] |
| C101 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C102 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C103 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C105 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| C106 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C107 | 1 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04µF +80%−20% |
| C108 | 1 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04µF +80%−20% |
| C109 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C110 | 1 | 1 | 1 | 1 | 1 | DD15330370 | Ceramic 33pF ±5% |
| C111 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1µF 50V |
| C112 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100µF 16V |
| C113 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C114 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| C115 | 1 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47µF 50V |
| C116 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C117 | 1 | 1 | 1 | 1 | 1 | DK18403320 | Ceramic 0.04µF +80%−20% |
| C118 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01µF ±20% |
| C119 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| C120 | 1 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7µF 50V |
| C122 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V [6] |
| C123 | 1 | 1 | 1 | 1 | 1 | DD11100370 | Ceramic 10pF ±0.5pF |
| C124 | 1 | 1 | 1 | 1 | 1 | DF16683300 | Film 0.068µF ±10% |
| C125 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100µF 16V |
| C126 | 1 | 1 | 1 | 1 | 1 | DF17393300 | Film 0.039µF ±20% |
| C127 | 1 | 1 | 1 | 1 | 1 | DF16104300 | Film 0.1µF ±10% |
| C128 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1µF 50V |
| C129 | 1 | 1 | 1 | 1 | 1 | EA22601630 | Elect 22µF 16V |
| C301 | | 1 | 1 | 1 | | EA10602530 | Elect 10µF 25V |
| C302 | 1 | 1 | 1 | 1 | 1 | EA22701630 | Elect 220µF 16V |
| C303 | 1 | | | | 1 | DF15183300 | Film 0.018µF ±5% |
| C303 | | 1 | 1 | 1 | | DF15123300 | Film 0.012µF ±5% |
| C304 | 1 | | | | 1 | DF15183300 | Film 0.018µF ±5% |
| C304 | | 1 | 1 | 1 | | DF15123300 | Film 0.012µF ±5% |
| C305 | 1 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7µF 50V |
| C306 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1µF 50V |
| C307 | 1 | 1 | 1 | 1 | 1 | EQ10505030 | Elect 1µF 50V |
| C308 | 1 | 1 | 1 | 1 | 1 | DF55821090 | Film 820pF ±5% |
| C309 | 1 | 1 | 1 | 1 | 1 | EQ10505030 | Elect 1µF 50V |
| C310 | 1 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7µF 50V |
| C311 | 1 | 1 | 1 | 1 | 1 | DF15473300 | Film 0.047µF ±5% |
| C312 | 1 | 1 | 1 | 1 | 1 | DF55511090 | Film 510pF ±5% |
| C313 | 1 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47µF 50V |
| C314 | 1 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47µF 50V |
| C315 | 1 | 1 | 1 | 1 | 1 | DF15332300 | Film 3300pF ±5% |
| C316 | 1 | 1 | 1 | 1 | 1 | DF15332300 | Film 3300pF ±5% |
| C317 | 1 | 1 | 1 | 1 | 1 | DK16331300 | Ceramic 330pF ±10% |
| C318 | 1 | 1 | 1 | 1 | 1 | DK16331300 | Ceramic 330pF ±10% |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| C319 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| C320 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| C321 | 1 | 1 | 1 | 1 | 1 | DF15102300 | Film 1000pF ±5% |
| C322 | 1 | 1 | 1 | 1 | 1 | DF15102300 | Film 1000pF ±5% |
| C323 | 1 | 1 | 1 | 1 | 1 | EA22505030 | Elect 2.2μF 50V |
| C324 | 1 | 1 | 1 | 1 | 1 | EA22505030 | Elect 2.2μF 50V |
| C325 | 1 | 1 | 1 | 1 | 1 | DF15272300 | Film 2700pF ±5% |
| C401 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| C402 | 1 | 1 | 1 | 1 | 1 | EA33505030 | Elect 3.3μF 50V |
| C403 | 1 | 1 | 1 | 1 | 1 | DK16331300 | Ceramic 330pF ±10% |
| C404 | 1 | 1 | 1 | 1 | 1 | DK16331300 | Ceramic 330pF ±10% |
| C405 | 1 | 1 | 1 | 1 | 1 | EA10701030 | Elect 100μF 10V |
| C406 | 1 | 1 | 1 | 1 | 1 | EA10701030 | Elect 100μF 10V |
| C407 | 1 | 1 | 1 | 1 | 1 | DF15123300 | Film 0.012μF ±5% |
| C408 | 1 | 1 | 1 | 1 | 1 | DF15123300 | Film 0.012μF ±5% |
| C409 | 1 | 1 | 1 | 1 | 1 | DF15332300 | Film 3300pF ±5% |
| C410 | 1 | 1 | 1 | 1 | 1 | DF15332300 | Film 3300pF ±5% |
| C411 | 1 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7μF 50V |
| C412 | 1 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7μF 50V |
| C413 | 1 | 1 | 1 | 1 | 1 | DD15101370 | Ceramic 100pF ±5% |
| C414 | 1 | 1 | 1 | 1 | 1 | DD15101370 | Ceramic 100pF ±5% |
| C415 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| C416 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| C417 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C418 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| | | | | | | | **P100-RESISTORS (All Resistors are ±5% & ¼W)** |
| RA01 | 1 | 1 | 1 | 1 | 1 | GD05225140 | 2.2MΩ |
| RA02 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| RA03 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| RA04 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RA05 | 1 | 1 | 1 | 1 | 1 | GD05152140 | 1.5KΩ |
| RA06 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| RA07 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| RA08 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| RA09 | 1 | 1 | 1 | 1 | 1 | GD05820140 | 82Ω |
| RA10 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RA11 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RA12 | 1 | 1 | 1 | 1 | 1 | RA05030800 | 50KΩ(B), Trimming |
| RA13 | 1 | 1 | 1 | 1 | 1 | GD05393140 | 39KΩ |
| RA14 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| RA15 | 1 | 1 | 1 | 1 | 1 | GD05101140 | 100Ω |
| RA16 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| RA17 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ |
| RA18 | 1 | | | | 1 | GG05101140 | 100Ω |
| RA18 | | 1 | 1 | 1 | | RF05470140 | 47Ω, Fusible |
| RA19 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| RA20 | 1 | 1 | 1 | 1 | 1 | GD05181140 | 180Ω |
| RA21 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| RA22 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RA23 | 1 | 1 | 1 | 1 | 1 | GD05272140 | 2.7KΩ |
| RA24 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ |
| RA25 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| RA26 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| RB01 | | 1 | | | | GD05473140 | 47KΩ, [L] |
| RB02 | | 1 | | | | GD05104140 | 100KΩ, [L] |
| RB03 | | 1 | | | | GD05103140 | 10KΩ, [L] |
| RB04 | | 1 | | | | GD05473140 | 47KΩ, [L] |
| RB05 | | 1 | | | | GD05104140 | 100KΩ, [L] |
| RB06 | | 1 | | | | GD05103140 | 10KΩ, [L] |
| RB07 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| RB08 | 1 | 1 | 1 | 1 | 1 | GD05105140 | 1MΩ |
| RC01 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RC02 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ |
| RC03 | 1 | 1 | 1 | 1 | 1 | GD05123140 | 12KΩ |
| RC04 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ |
| RS01 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| RS02 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| RS03 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| RS04 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| RS05 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2KΩ |
| RS06 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2KΩ |
| RS07 | 1 | 1 | 1 | 1 | 1 | GD05183140 | 18KΩ |
| RS08 | 1 | 1 | 1 | 1 | 1 | GD05183140 | 18KΩ |
| RS09 | 1 | 1 | 1 | 1 | | GD05823140 | 82KΩ [5] |
| RS09 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ [6] |
| RS10 | 1 | 1 | 1 | 1 | | GD05823140 | 82KΩ [5] |
| RS10 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ [6] |
| RS11 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ [6] |
| RS12 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ [6] |
| RS13 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ [6] |
| RS14 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ [6] |
| R101 | 1 | 1 | 1 | 1 | 1 | GD05101140 | 100Ω |
| R102 | 1 | 1 | 1 | 1 | 1 | GD05331140 | 330Ω |
| R103 | 1 | 1 | 1 | 1 | 1 | GD05272140 | 2.7KΩ |
| R104 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ |
| R105 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| R106 | 1 | 1 | 1 | 1 | 1 | GD05331140 | 330Ω |
| R107 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| R108 | 1 | 1 | 1 | 1 | 1 | GD05331140 | 330Ω |
| R111 | 1 | 1 | 1 | 1 | 1 | GD05821140 | 820Ω |
| R112 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33KΩ |
| R113 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| R114 | 1 | 1 | 1 | 1 | 1 | GD05272140 | 2.7KΩ |
| R115 | 1 | 1 | 1 | 1 | 1 | GD05124140 | 120KΩ |
| R116 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R117 | 1 | 1 | 1 | 1 | 1 | RA05020800 | 5KΩ(B), Trimming |
| R118 | 1 | 1 | 1 | 1 | 1 | RA05020800 | 5KΩ(B), Trimming |
| R119 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| R120 | 1 | | | | 1 | GG05470140 | 47Ω |
| ⚠R120 | | 1 | 1 | 1 | | RF05470140 | 47Ω, Fusible |
| R121 | 1 | | | | 1 | GG05470140 | 47Ω |
| ⚠R121 | | 1 | 1 | 1 | | RF05470140 | 47Ω, Fusible |
| R122 | | 1 | 1 | 1 | | GD05104140 | 100KΩ [6] |
| R123 | | 1 | 1 | 1 | | GD05684140 | 680KΩ [6] |
| R124 | | 1 | 1 | 1 | | GD05472140 | 4.7KΩ [6] |
| R125 | | 1 | 1 | 1 | | GD05103140 | 10KΩ [6] |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| R126 | 1 | 1 | 1 | 1 | 1 | GD05273140 | 27KΩ |
| R127 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R128 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| R129 | 1 | 1 | 1 | 1 | 1 | GD05101140 | 100Ω |
| R130 | 1 | 1 | 1 | 1 | 1 | GD05124140 | 120KΩ |
| R131 | 1 | 1 | 1 | 1 | 1 | GD05563140 | 56KΩ |
| R132 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ |
| R133 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| R135 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ |
| R136 | 1 | 1 | 1 | 1 | 1 | GD05334140 | 330KΩ |
| R137 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33KΩ |
| R138 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| R140 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R141 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R142 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2KΩ |
| R301 | | 1 | 1 | 1 | | GD05223140 | 22KΩ [5] |
| R301 | | 1 | 1 | 1 | | GD05103140 | 10KΩ [6] |
| R302 | 1 | | | | 1 | GG05470140 | 47Ω |
| ⚠R302 | | 1 | 1 | 1 | | RF05470140 | 47Ω, Fusible |
| R303 | 1 | 1 | 1 | 1 | 1 | GD05472140 | 4.7KΩ |
| R304 | 1 | 1 | 1 | 1 | 1 | GD05472140 | 4.7KΩ |
| R305 | 1 | 1 | 1 | 1 | 1 | GD05154140 | 150KΩ |
| R306 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ |
| R307 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| R308 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| R309 | 1 | | | | 1 | RA05020800 | 5KΩ(B), Trimming |
| R309 | | 1 | 1 | 1 | | RA01030800 | 10KΩ(B), Trimming |
| R310 | 1 | 1 | 1 | 1 | 1 | GD05821140 | 820Ω |
| R311 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ |
| R312 | 1 | 1 | 1 | 1 | 1 | RA05020800 | 5KΩ(B), Trimming |
| R313 | 1 | 1 | 1 | 1 | 1 | GD05224140 | 220KΩ |
| R314 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ |
| R315 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| R316 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| R317 | 1 | 1 | 1 | 1 | 1 | GD05105140 | 1MΩ |
| R318 | 1 | 1 | 1 | 1 | 1 | GD05105140 | 1MΩ |
| R319 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R320 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R321 | 1 | 1 | 1 | 1 | 1 | GD05184140 | 180KΩ |
| R322 | 1 | 1 | 1 | 1 | 1 | GD05184140 | 180KΩ |
| R323 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R324 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R325 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| R326 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| R327 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| R328 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| R329 | 1 | 1 | 1 | 1 | 1 | GD05391140 | 390Ω |
| R330 | 1 | 1 | 1 | 1 | 1 | GD05391140 | 390Ω |
| R333 | 1 | 1 | 1 | 1 | 1 | GD05182140 | 1.8KΩ |
| R334 | 1 | 1 | 1 | 1 | 1 | GD05182140 | 1.8KΩ |
| R335 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R336 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R337 | 1 | | | | 1 | GD05472140 | 4.7KΩ |
| R337 | | 1 | 1 | 1 | | GD05102140 | 1KΩ |
| R338 | 1 | | | | 1 | RA02030800 | 20KΩ(B), Trimming |
| R338 | | 1 | 1 | 1 | | RA05020800 | 5KΩ(B), Trimming |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| R401 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R402 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R403 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| R404 | 1 | 1 | 1 | 1 | 1 | GD05222140 | 2.2KΩ |
| R405 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R406 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R407 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R408 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R409 | 1 | 1 | 1 | 1 | 1 | GD05274140 | 270KΩ |
| R410 | 1 | 1 | 1 | 1 | 1 | GD05274140 | 270KΩ |
| R411 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| R412 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| R413 | 1 | 1 | 1 | 1 | 1 | GD05224140 | 220KΩ |
| R414 | 1 | 1 | 1 | 1 | 1 | GD05224140 | 220KΩ |
| R415 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| R416 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| ⚠R417 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| ⚠R418 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| | | | | | | | **P100-SEMICONDUCTORS** |
| DA01 | 1 | 1 | 1 | 1 | 1 | HD40003420 | Varicap KV-1236Z |
| DA02 | 1 | 1 | 1 | 1 | 1 | HV00006120 | Varistor MV-203 |
| DA03 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| DB01 | | 1 | | | | HD20015030 | Diode DS-135D, [L] |
| DB02 | | 1 | | | | HD20015030 | Diode DS-135D, [L] |
| D102 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D104 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D105 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D106 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D107 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D108 | 1 | 1 | 1 | 1 | 1 | HD30029090 | Zener WZ-090 |
| D109 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D110 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D301 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D302 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| D303 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| QA01 | 1 | 1 | 1 | 1 | 1 | HC10058030 | IC LA1245 |
| QA02 | 1 | 1 | 1 | 1 | 1 | HF200551D0 | F.E.T. 2SK55(D) |
| QA03 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| QA04 | 1 | 1 | 1 | 1 | 1 | HT308291C0 | Transistor 2SC829(C) |
| QB01 | | 1 | | | | HT309452A0 | Transistor 2SC945(Q or R),[L] |
| QB02 | | 1 | | | | HT408632B0 | Transistor 2SD863(E or F),[L] |
| QB03 | | 1 | | | | HT309452A0 | Transistor 2SC945(Q or R),[L] |
| QB04 | | 1 | | | | HT408632B0 | Transistor 2SD863(E or F),[L] |
| QC01 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| QC02 | 1 | 1 | 1 | 1 | 1 | HT107332A0 | Transistor 2SA733(Q or R) |
| QC03 | 1 | 1 | 1 | 1 | 1 | HT107332A0 | Transistor 2SA733(Q or R) |
| Q101 | 1 | 1 | 1 | 1 | 1 | HT310471C0 | Transistor 2SC1047(C) |
| Q102 | 1 | 1 | 1 | 1 | 1 | HC10033010 | IC HA11225 |
| Q103 | | 1 | 1 | 1 | | HT309452A0 | Transistor 2SC945(Q or R) |
| Q104 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q105 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q106 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q107 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY |  |  |  |  | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  | U | N | E | A | P |  |  |
| Q301 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q302 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q303 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q304 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q305 | 1 | 1 | 1 | 1 | 1 | HC10001420 | IC KB4437 |
| Q401 | 1 | 1 | 1 | 1 | 1 | HC10013370 | IC TL4558PS |
|  |  |  |  |  |  |  | **P100-MISCELLANEOUS** |
| A101 | 1 | 1 | 1 | 1 | 1 | AV01402010 | V.H.F. Tuner, Front End |
| FA01 | 1 | 1 | 1 | 1 | 1 | FG450302B0 | Ceramic Filter, SFZ450B-3 |
| FA02 |  | 1 |  |  |  | FF10045270 | Ceramic Filter, BFU450C [L] |
| F101 | 1 | 1 | 1 | 1 | 1 | FF11070530 | Ceramic Filter, SFE10.7MHz; MD-1 |
| F102 | 1 |  |  |  | 1 | FF11070530 | Ceramic Filter, SFE10.7MHz; MD-1 |
| F102 |  | 1 | 1 | 1 |  | FF11070570 | Ceramic Filter, SFE10.7MHz; MS3G |
| F103 | 1 |  |  |  | 1 | FF11070530 | Ceramic Filter, SFE10.7MHz; MD-1 |
| F103 |  | 1 | 1 | 1 |  | FF11070570 | Ceramic Filter, SFE10.7MHz; MS3G |
| JS01 | 1 | 1 | 1 | 1 | 1 | YJ06002430 | Jack, (3P) |
| JS02 | 1 | 1 | 1 | 1 | 1 | YJ06002390 | Jack, (5P) |
| J101 | 1 | 1 | 1 | 1 | 1 | YT01040290 | Terminal, Antenna (4P) |
| J108 |  | 1 |  |  |  | YJ06002430 | Jack, (3P) [L] |
| J109 | 1 |  |  |  | 1 | YT02040480 | Terminal, (4P) |
| J109 |  | 1 | 1 | 1 |  | YT02040470 | Terminal, (4P) |
| J110 | 1 |  |  |  | 1 | YT02040480 | Terminal, (4P) |
| J110 |  | 1 | 1 | 1 |  | YT02040470 | Terminal, (4P) |
| J112 | 1 | 1 | 1 | 1 | 1 | YJ06002430 | Jack, (3P) |
| J113 | 1 | 1 | 1 | 1 | 1 | YJ06002440 | Jack, (4P) |
| J114 | 1 | 1 | 1 | 1 | 1 | YJ06002430 | Jack, (3P) |
| LA01 | 1 | 1 | 1 | 1 | 1 | LO10013330 | OSC Coil, MW |
| LA02 |  | 1 |  |  |  | LO10013300 | OSC Coil, LW [L] |
| LA03 | 1 | 1 | 1 | 1 | 1 | LA10015010 | Ant. Coil, MW |
| LA04 |  | 1 |  |  |  | LA10015020 | Ant. Coil, LW [L] |
| LA05 | 1 | 1 | 1 | 1 | 1 | LI10010730 | I.F.T. Coil, FM IFT |
| L101 | 1 | 1 | 1 | 1 | 1 | LI10159040 | I.F.T. Coil, FM Det |
| L102 | 1 | 1 | 1 | 1 | 1 | LI10159050 | I.F.T. Coil, FM Det |
| L103 |  | 1 | 1 | 1 |  | LS10440030 | M.P.X. Coil, [5] |
| L103 |  | 1 | 1 | 1 |  | LS27025010 | M.P.X. Coil, [6] |
| L104 | 1 | 1 | 1 | 1 | 1 | LC11050060 | Choke Coil, 1mH |
| SB01 |  | 1 |  |  |  | SZ04240010 | Solenoid, Switch; [L] |
| SS01 | 1 | 1 | 1 | 1 | 1 | SP02030220 | Push Switch |
| SS02 | 1 | 1 | 1 | 1 |  | SP02050090 | Push Switch, [5] |
| SS02 | 1 | 1 | 1 | 1 | 1 | SP04070080 | Push Switch, [6] |
| WS01 | 1 | 1 | 1 | 1 | 1 | YU03260260 | Jumper Lead, (3P) |
| W101 | 1 | 1 | 1 | 1 | 1 | YU07200260 | Jumper Lead, (7P) |

| REF. DESIG. | Q'TY |  |  |  |  | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  | U | N | E | A | P |  |  |
|  |  |  |  |  |  |  | **P501-U-COM CIRCUIT BOARD** |
| P501 | 1 | 1 | 1 | 1 | 1 | YK123H1410 | P.W. Board, U-COM |
|  | 1 | 1 | 1 | 1 | 1 | ZZ123H1410 | P.W. Board Assembly |
|  |  |  |  |  |  |  | **P501-CAPACITORS** |
| C501 | 1 | 1 | 1 | 1 | 1 | DK16102300 | Ceramic 1000pF ±10% |
| C502 | 1 | 1 | 1 | 1 | 1 | DK16222300 | Ceramic 2200pF ±10% |
| C503 | 1 | 1 | 1 | 1 | 1 | DK16103300 | Ceramic 0.01μF ±10% |
| C504 | 1 | 1 | 1 | 1 | 1 | EA22601630 | Elect 22μF 16V |
| C505 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C506 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C507 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C508 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C509 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |
| C510 | 1 | 1 | 1 | 1 | 1 | EQ22505030 | Elect 2.2μF 50V |
| C511 | 1 | 1 | 1 | 1 | 1 | DF15103300 | Film 0.01μF ±5% |
| C512 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| C516 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C517 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C518 | 1 | 1 | 1 | 1 | 1 | DD15820300 | Ceramic 82pF ±5% |
|  |  |  |  |  |  |  | **P501-RESISTORS (All Resistors are ±5% & ¼W)** |
| R501 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8KΩ |
| R502 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| R503 | 1 | 1 | 1 | 1 | 1 | GD05561140 | 560Ω |
| R504 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| R505 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| R510 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| R511 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ |
| R512 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R513 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| R514 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ |
| R515 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ |
| R516 | 1 | 1 | 1 | 1 | 1 | GD05224140 | 220KΩ |
|  |  |  |  |  |  |  | **P501-SEMICONDUCTORS** |
| D501 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |
| D502 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |
| D503 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |
| D504 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |
| D520 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |
| D521 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473 |
| Q501 | 1 | 1 | 1 | 1 | 1 | HC10070050 | IC TC9147P |
| Q502 | 1 | 1 | 1 | 1 | 1 | HC10072050 | IC TD6104AP |
| Q504 | 1 | 1 | 1 | 1 | 1 | HF200301C0 | F.E.T. 2SK30A(Y) |
| Q505 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q508 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
|  |  |  |  |  |  |  | **P501-MISCELLANEOUS** |
| W501 | 1 | 1 | 1 | 1 | 1 | YU04140260 | Jumper Lead, (4P) |
| W502 | 1 | 1 | 1 | 1 | 1 | YU06080260 | Jumper Lead, (6P) |
| W503 | 1 | 1 | 1 | 1 | 1 | YU08140260 | Jumper Lead, (8P) |
| W504 | 1 | 1 | 1 | 1 | 1 | YU08140260 | Jumper Lead, (8P) |
| W505 | 1 | 1 | 1 | 1 | 1 | YU03400260 | Jumper Lead, (3P) |
| W506 | 1 | 1 | 1 | 1 | 1 | YU03140260 | Jumper Lead, (3P) |
| W507 | 1 | 1 | 1 | 1 | 1 | YU03160260 | Jumper Lead, (3P) |
| X501 | 1 | 1 | 1 | 1 | 1 | XB115001L2 | Crystal, 7.2MHz |
| ZB01 | 1 | 1 | 1 | 1 | 1 | ZB09010010 | Battery, 200mA 3V |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **P502-DISPLAY CIRCUIT BOARD** |
| P502 | 1 | 1 | 1 | 1 | 1 | YK123H1420 | P.W. Board, Display |
| | 1 | 1 | 1 | 1 | 1 | ZZ123H1420 | P.W. Board Assembly |
| | | | | | | | **P502-CAPACITOR** |
| C519 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| | | | | | | | **P502-RESISTORS** |
| R521 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ ±5% ¼W |
| R522 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ ±5% ¼W |
| R523 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ ±5% ¼W |
| R524 | 1 | 1 | 1 | 1 | 1 | GD05473140 | 47KΩ ±5% ¼W |
| R526 | 1 | 1 | 1 | 1 | 1 | GD05123140 | 12KΩ ±5% ¼W |
| R527 | 1 | 1 | 1 | 1 | 1 | GD05154140 | 150KΩ ±5% ¼W |
| R528 | 1 | 1 | 1 | 1 | 1 | GD05153140 | 15KΩ ±5% ¼W |
| R529 | 1 | 1 | 1 | 1 | 1 | GD05183140 | 18KΩ ±5% ¼W |
| R530 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8KΩ ±5% ¼W |
| R531 | 1 | 1 | 1 | 1 | 1 | GD05472140 | 4.7KΩ ±5% ¼W |
| G501 | 1 | 1 | 1 | 1 | 1 | BW10103050 | 10KΩ x 7, Compo. |
| G502 | 1 | 1 | 1 | 1 | 1 | BW10103050 | 10KΩ x 7, Compo. |
| G503 | 1 | 1 | 1 | 1 | 1 | BW10103050 | 10KΩ x 7, Compo. |
| | | | | | | | **P502-SEMICONDUCTORS** |
| Q503 | 1 | 1 | 1 | 1 | 1 | HC10071050 | IC TD6301AP |
| Q511 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q512 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| | | | | | | | **P502-MISCELLANEOUS** |
| V501 | 1 | 1 | 1 | 1 | 1 | HQ30902060 | Display Unit, FIP7B8S |
| W509 | 1 | 1 | 1 | 1 | 1 | YU02080260 | Jumper Lead, (2P) |
| W510 | 1 | 1 | 1 | 1 | 1 | YU03120260 | Jumper Lead, (3P) |
| | | | | | | | **P503-KEY SWITCH CIRCUIT BOARD** |
| P503 | 1 | 1 | 1 | 1 | 1 | YK123H1430 | P.W. Board, Key Switch |
| | 1 | 1 | 1 | 1 | 1 | ZZ123H1430 | P.W. Board Assembly |
| | | | | | | | **P503-CAPACITORS** |
| C520 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| C521 | 1 | 1 | 1 | 1 | 1 | DD15270300 | Ceramic 27pF ±5% |
| | | | | | | | **P503-RESISTORS** |
| R532 | 1 | 1 | 1 | 1 | 1 | GD05331140 | 330Ω ±5% ¼W |
| R533 | 1 | 1 | 1 | 1 | 1 | GD05331140 | 330Ω ±5% ¼W |
| R534 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ ±5% ¼W |
| | | | | | | | **P503-SEMICONDUCTORS** |
| D505 | 1 | 1 | 1 | 1 | 1 | HI10030020 | L.E.D. LN224RP |
| D506 | 1 | 1 | 1 | 1 | 1 | HI10030020 | L.E.D. LN224RP |
| D507 | 1 | 1 | 1 | 1 | 1 | HI10030020 | L.E.D. LN224RP |
| D508 | 1 | 1 | 1 | 1 | 1 | HI10031020 | L.E.D. LN324GP |
| D509 | 1 | 1 | 1 | 1 | 1 | HI10031020 | L.E.D. LN324GP |
| D510 ~ D519 | 10 | 10 | 10 | 10 | 10 | HI10030020 | L.E.D. LN224RP |
| Q513 | 1 | 1 | 1 | 1 | 1 | HC10098030 | IC LB1413 |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **P503-MISCELLANEOUS** |
| S501 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Memory |
| S502 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 1 |
| S503 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 2 |
| S504 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 3 |
| S505 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 4 |
| S506 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 5 |
| S507 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 6 |
| S508 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 7 |
| S509 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Preset 8 |
| S510 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Down |
| S511 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Down |
| S512 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Up |
| S513 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Up |
| S514 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Function, AM |
| S516 | 1 | 1 | 1 | 1 | 1 | SP01010580 | Push SW. Function, FM |
| W511 | 1 | 1 | 1 | 1 | 1 | YU04160260 | Jumper Lead, (4P) |
| | | | | | | | **P504-SCAN STEP CIRCUIT BOARD** |
| P504 | 1 | 1 | 1 | 1 | 1 | YK123H1440 | P.W. Board, Scan Step |
| | 1 | 1 | 1 | 1 | 1 | ZZ123H1440 | P.W. Board Assembly |
| S517 | 1 | 1 | 1 | 1 | 1 | SS02020640 | Slide Switch, Scan Step |
| | | | | | | | **(SR520, ONLY)**<br>**P700-MAIN/POWER SUPPLY CIRCUIT BOARD** |
| P700 | 1 | 1 | 1 | 1 | | YK123H2820 | P.W. Board, Main/Power Supply |
| | 1 | | | | | ZZ123H2820 | P.W. Board Assembly |
| | | 1 | 1 | 1 | | ZZ123H8820 | P.W. Board Assembly |
| | | | | | | | **(SR520L, ONLY)** |
| P700 | | 1 | | | | YK123H2820 | P.W. Board, Main/Power Supply |
| | | 1 | | | | ZZ124H8820 | P.W. Board Assembly |
| | | | | | | | **P700-CAPACITORS** |
| CN01 | 1 | 1 | 1 | 1 | | EA10701030 | Elect 100μF 10V |
| C701 | 1 | 1 | 1 | 1 | | DK16331300 | Ceramic 330pF ±10% |
| C702 | 1 | 1 | 1 | 1 | | DK16331300 | Ceramic 330pF ±10% |
| C703 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C704 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C705 | 1 | 1 | 1 | 1 | | DK16102300 | Ceramic 1000pF ±10% |
| C706 | 1 | 1 | 1 | 1 | | DK16102300 | Ceramic 1000pF ±10% |
| C707 | 1 | 1 | 1 | 1 | | DK16471300 | Ceramic 470pF ±10% |
| C708 | 1 | 1 | 1 | 1 | | DK16471300 | Ceramic 470pF ±10% |
| C709 | 1 | 1 | 1 | 1 | | EA47601630 | Elect 47μF 16V |
| C710 | 1 | 1 | 1 | 1 | | EA47601630 | Elect 47μF 16V |
| C711 | 1 | 1 | 1 | 1 | | DD10020370 | Ceramic 2pF ±0.25pF |
| C712 | 1 | 1 | 1 | 1 | | DD10020370 | Ceramic 2pF ±0.25pF |
| C713 | 1 | 1 | 1 | 1 | | DF15473550 | Film 0.047μF ±5% |
| C714 | 1 | 1 | 1 | 1 | | DF15473550 | Film 0.047μF ±5% |
| C715 | 1 | 1 | 1 | 1 | | EA47605030 | Elect 47μF 50V |
| C716 | 1 | 1 | 1 | 1 | | EA47605030 | Elect 47μF 50V |
| C717 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C718 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C719 | 1 | 1 | 1 | 1 | | DK16151300 | Ceramic 150pF ±10% |
| C720 | 1 | 1 | 1 | 1 | | DK16151300 | Ceramic 150pF ±10% |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| C722 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C723 | 1 | 1 | 1 | 1 | | EA10705030 | Elect 100μF 50V |
| C724 | 1 | 1 | 1 | 1 | | EA10705030 | Elect 100μF 50V |
| C725 | 1 | 1 | 1 | 1 | | EA10605030 | Elect 10μF 50V |
| C726 | 1 | 1 | 1 | 1 | | EA10605030 | Elect 10μF 50V |
| C727 | 1 | 1 | 1 | 1 | | DD10050370 | Ceramic 5pF ±0.25pF |
| C728 | 1 | 1 | 1 | 1 | | DD10050370 | Ceramic 5pF ±0.25pF |
| C729 | 1 | 1 | 1 | 1 | | DD15150370 | Ceramic 15pF ±5% |
| C730 | 1 | 1 | 1 | 1 | | DD15150370 | Ceramic 15pF ±5% |
| C801 | 1 | 1 | 1 | 1 | | EB68804540 | Elect 6800μF 45V |
| C802 | 1 | 1 | 1 | 1 | | EB68804540 | Elect 6800μF 45V |
| C803 | 1 | 1 | 1 | 1 | | EA10605030 | Elect 10μF 50V |
| ⚠C805 | 1 | 1 | 1 | 1 | | EA10701630 | Elect 100μF 16V |
| C806 | 1 | 1 | 1 | 1 | | EA10605030 | Elect 10μF 50V |
| C807 | 1 | 1 | 1 | 1 | | EA22702530 | Elect 220μF 25V |
| C808 | 1 | 1 | 1 | 1 | | EA10701630 | Elect 100μF 16V |
| C809 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C810 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C811 | 1 | 1 | 1 | 1 | | EA10505030 | Elect 1μF 50V |
| C813 | 1 | 1 | 1 | 1 | | EA10605030 | Elect 10μF 50V |
| C814 | 1 | 1 | 1 | 1 | | DK18103560 | Ceramic 0.01μF +100%–0 |
| C815 | 1 | 1 | 1 | 1 | | DK18103560 | Ceramic 0.01μF +100%–0 |
| C816 | 1 | 1 | 1 | 1 | | EA47701630 | Elect 470μF 16V |
| | | | | | | | **P700-RESISTORS**<br>**(All Resistors are ±5% & ¼W)** |
| RN01 | 1 | 1 | 1 | 1 | | GD05154140 | 150KΩ |
| R701 | 1 | 1 | 1 | 1 | | GD05392140 | 3.9KΩ |
| R702 | 1 | 1 | 1 | 1 | | GD05392140 | 3.9KΩ |
| R703 | 1 | 1 | 1 | 1 | | GD05221140 | 220Ω |
| R704 | 1 | 1 | 1 | 1 | | GD05221140 | 220Ω |
| R705 | 1 | 1 | 1 | 1 | | GD05563140 | 56KΩ |
| R706 | 1 | 1 | 1 | 1 | | GD05563140 | 56KΩ |
| R707 | 1 | 1 | 1 | 1 | | GD05331140 | 330Ω |
| R708 | 1 | 1 | 1 | 1 | | GD05331140 | 330Ω |
| R709 | 1 | 1 | 1 | 1 | | GD05102140 | 1KΩ |
| R710 | 1 | 1 | 1 | 1 | | GD05102140 | 1KΩ |
| R711 | 1 | 1 | 1 | 1 | | GD05332140 | 3.3KΩ |
| R712 | 1 | 1 | 1 | 1 | | GD05332140 | 3.3KΩ |
| R713 | 1 | 1 | 1 | 1 | | GD05563140 | 56KΩ |
| R714 | 1 | 1 | 1 | 1 | | GD05563140 | 56KΩ |
| R715 | 1 | 1 | 1 | 1 | | RC10022120 | 2.2Ω ±10% ½W |
| R716 | 1 | 1 | 1 | 1 | | RC10022120 | 2.2Ω ±10% ½W |
| ⚠R717 | 1 | 1 | 1 | 1 | | GA05100020 | 10Ω 2W |
| ⚠R718 | 1 | 1 | 1 | 1 | | GA05100020 | 10Ω 2W |
| R719 | 1 | 1 | 1 | 1 | | GG05101140 | 100Ω |
| R720 | 1 | 1 | 1 | 1 | | GG05470140 | 47Ω |
| R721 | 1 | 1 | 1 | 1 | | GD05332140 | 3.3KΩ |
| R722 | 1 | 1 | 1 | 1 | | GD05332140 | 3.3KΩ |
| R723 | 1 | 1 | 1 | 1 | | GD05332140 | 3.3KΩ |
| R724 | 1 | 1 | 1 | 1 | | GD05332140 | 3.3KΩ |
| R725 | 1 | 1 | 1 | 1 | | GD05152140 | 1.5KΩ |
| R726 | 1 | 1 | 1 | 1 | | GD05152140 | 1.5KΩ |
| R727 | 1 | 1 | 1 | 1 | | GD05100140 | 10Ω |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| ⚠R801 | 1 | 1 | 1 | 1 | | GA05220020 | 22Ω 2W |
| ⚠R802 | 1 | 1 | 1 | 1 | | RF05100140 | 10Ω, Fusible |
| R803 | 1 | 1 | 1 | 1 | | GG05392140 | 3.9KΩ |
| R804 | 1 | 1 | 1 | 1 | | GA05471020 | 470Ω 2W |
| R805 | 1 | 1 | 1 | 1 | | GA05181010 | 180Ω 1W |
| ⚠R806 | 1 | 1 | 1 | 1 | | GA05102010 | 1KΩ 1W |
| ⚠R807 | 1 | 1 | 1 | 1 | | GD05683140 | 68KΩ |
| R808 | 1 | 1 | 1 | 1 | | GD05473140 | 47KΩ |
| R810 | 1 | 1 | 1 | 1 | | GD05393140 | 39KΩ |
| R811 | 1 | 1 | 1 | 1 | | GD05103140 | 10KΩ |
| R812 | 1 | 1 | 1 | 1 | | GA05821020 | 820Ω 2W |
| | | | | | | | **P700-SEMICONDUCTORS** |
| DN01 | 1 | 1 | 1 | 1 | | HD20001210 | Diode 1S2473 |
| ⚠D801 | 1 | 1 | 1 | 1 | | HD20008290 | Diode S4VB |
| ⚠D802 | 1 | 1 | 1 | 1 | | HD30027090 | Zener WZ140 |
| ⚠D803 | 1 | 1 | 1 | 1 | | HD30027090 | Zener WZ140 |
| ⚠D804 | 1 | 1 | 1 | 1 | | HD20015030 | Diode DS135D |
| ⚠D806 | 1 | 1 | 1 | 1 | | HD20015030 | Diode DS135D |
| D807 | 1 | 1 | 1 | 1 | | HD20015030 | Diode DS135D |
| D808 | 1 | 1 | 1 | 1 | | HD30027090 | Zener WZ140 |
| QN01 | 1 | 1 | 1 | 1 | | HC10036020 | IC AN6136 |
| Q701 | 1 | 1 | 1 | 1 | | HC10096030 | IC STK3044 |
| Q702 | 1 | 1 | 1 | 1 | | HC10089030 | IC STK2240 |
| ⚠Q801 | 1 | 1 | 1 | 1 | | HT412652A0 | Transistor 2SD1265(O or P) |
| Q802 | 1 | 1 | 1 | 1 | | HC10031060 | IC μPC78L05 |
| | | | | | | | **P700-MISCELLANEOUS** |
| J704 | 1 | 1 | 1 | 1 | | YJ06002430 | Jack, (3P) |
| J814 | 1 | 1 | 1 | 1 | | YJ06002430 | Jack, (3P) |
| J815 | 1 | 1 | 1 | 1 | | YJ06002430 | Jack, (3P) |
| J816 | 1 | 1 | 1 | 1 | | YJ06002440 | Jack, (3P) |
| L701 | 1 | 1 | 1 | 1 | | LL23905120 | Coil, 1μH |
| L702 | 1 | 1 | 1 | 1 | | LL23905120 | Coil, 1μH |
| | | | | | | | **(SR620, ONLY)**<br>**P700-MAIN/POWER SUPPLY CIRCUIT BOARD** |
| P700 | 1 | 1 | 1 | 1 | 1 | YK125H1920 | P.W. Board, Main/Power Supply |
| | 1 | 1 | 1 | 1 | 1 | ZZ125H1920 | P.W. Board Assembly |
| | | | | | | | **(SR620L, ONLY)** |
| P700 | | 1 | | | | YK125H1920 | P.W. Board, Main/Power Supply |
| | | 1 | | | | ZZ126H8920 | P.W. Board Assembly |
| | | | | | | | **P700-CAPACITORS** |
| CN01 | 1 | 1 | 1 | 1 | 1 | EA10701030 | Elect 100μF 10V |
| CN02 | 1 | 1 | 1 | 1 | 1 | EA10701030 | Elect 100μF 10V |
| CN03 | 1 | 1 | 1 | 1 | 1 | DK16472300 | Ceramic 4700pF ±10% |
| CN04 | 1 | 1 | 1 | 1 | 1 | DK16472300 | Ceramic 4700pF ±10% |
| CN05 | 1 | 1 | 1 | 1 | 1 | EA47601030 | Elect 47μF 10V |
| CN06 | 1 | 1 | 1 | 1 | 1 | EA22701030 | Elect 220μF 10V |
| CN07 | 1 | 1 | 1 | 1 | 1 | DK17103300 | Ceramic 0.01μF ±20% |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| C701 | 1 | 1 | 1 | 1 | 1 | DK16331300 | Ceramic 330pF ±10% |
| C702 | 1 | 1 | 1 | 1 | 1 | DK16331300 | Ceramic 330pF ±10% |
| C703 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C704 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C705 | 1 | 1 | 1 | 1 | 1 | DK16471300 | Ceramic 470pF ±10% |
| C706 | 1 | 1 | 1 | 1 | 1 | DK16471300 | Ceramic 470pF ±10% |
| C707 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C708 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C709 | 1 | 1 | 1 | 1 | 1 | DD11070370 | Ceramic 7pF ±0.5pF |
| C710 | 1 | 1 | 1 | 1 | 1 | DD11070370 | Ceramic 7pF ±0.5pF |
| C711 | 1 | 1 | 1 | 1 | 1 | DD15151560 | Ceramic 150pF ±5% |
| C712 | 1 | 1 | 1 | 1 | 1 | DD15151560 | Ceramic 150pF ±5% |
| C713 | 1 | 1 | 1 | 1 | 1 | DD15151560 | Ceramic 150pF ±5% |
| C714 | 1 | 1 | 1 | 1 | 1 | DD15151560 | Ceramic 150pF ±5% |
| C715 | 1 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47μF 50V |
| C716 | 1 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47μF 50V |
| C717 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1μF 50V |
| C718 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1μF 50V |
| C719 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1μF 50V |
| C720 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1μF 50V |
| C801 | 1 | 1 | 1 | 1 | 1 | EB10905020 | Elect 10000μF 50V |
| C802 | 1 | 1 | 1 | 1 | 1 | EB10905020 | Elect 10000μF 50V |
| C803 | 1 | 1 | 1 | 1 | 1 | EA10605030 | Elect 10μF 50V |
| ⚠C805 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| C806 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
| C807 | 1 | 1 | 1 | 1 | 1 | EA10605030 | Elect 10μF 50V |
| C808 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100μF 16V |
| C809 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C810 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C811 | 1 | 1 | 1 | 1 | 1 | EA10505030 | Elect 1μF 50V |
| C812 |  | 1 |  |  |  | EA10705030 | Elect 100μF 50V [L] |
| C813 | 1 | 1 | 1 | 1 | 1 | EA47405030 | Elect 0.47μF 50V |
| C814 | 1 | 1 | 1 | 1 | 1 | DK18103560 | Ceramic 0.01μF +100%–0 |
| C815 | 1 | 1 | 1 | 1 | 1 | EA10605030 | Elect 10μF 50V |
| C816 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10μF 25V |
|  |  |  |  |  |  |  | **P700-RESISTORS**<br>**(All Resistors are ±5% & ¼W)** |
| RN01 | 1 | 1 | 1 | 1 | 1 | GD05121140 | 120Ω |
| RN02 | 1 | 1 | 1 | 1 | 1 | GD05121140 | 120Ω |
| RN03 | 1 | 1 | 1 | 1 | 1 | GD05123140 | 12KΩ |
| RN04 | 1 | 1 | 1 | 1 | 1 | GD05123140 | 12KΩ |
| RN05 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| RN06 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| RN07 | 1 | 1 | 1 | 1 | 1 | GD05273140 | 27KΩ |
| RN08 | 1 | 1 | 1 | 1 | 1 | GA05331010 | 330Ω |
| RN09 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RN10 | 1 | 1 | 1 | 1 | 1 | GD05822140 | 8.2KΩ |
| RN11 | 1 | 1 | 1 | 1 | 1 | GD05472140 | 4.7KΩ |
| RN12 | 1 | 1 | 1 | 1 | 1 | GD05123140 | 12KΩ |
| RN13 | 1 | 1 | 1 | 1 | 1 | GD05184140 | 180KΩ |
| RN14 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33KΩ |
| RN15 | 1 | 1 | 1 | 1 | 1 | GA05102010 | 1KΩ 1W |
| RN16 | 1 | 1 | 1 | 1 | 1 | GD05220140 | 22Ω |
| RN17 | 1 | 1 | 1 | 1 | 1 | GA05562010 | 5.6KΩ 1W |
| RN18 | 1 | 1 | 1 | 1 | 1 | GA05562010 | 5.6KΩ 1W |

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| R701 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| R702 | 1 | 1 | 1 | 1 | 1 | GD05221140 | 220Ω |
| R703 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33KΩ |
| R704 | 1 | 1 | 1 | 1 | 1 | GD05333140 | 33KΩ |
| R705 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R706 | 1 | 1 | 1 | 1 | 1 | GD05471140 | 470Ω |
| R707 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| R708 | 1 | 1 | 1 | 1 | 1 | GD05332140 | 3.3KΩ |
| R709 | 1 | 1 | 1 | 1 | 1 | RA02030800 | 20KΩ(B), Trimming |
| R710 | 1 | 1 | 1 | 1 | 1 | RA02030800 | 20KΩ(B), Trimming |
| R711 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| R712 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| R713 | 1 | 1 | 1 | 1 | 1 | GD05683140 | 68KΩ |
| R714 | 1 | 1 | 1 | 1 | 1 | GD05683140 | 68KΩ |
| R715 | 1 | 1 | 1 | 1 | 1 | RC10022120 | 2.2Ω ±10% ½W |
| R716 | 1 | 1 | 1 | 1 | 1 | RC10022120 | 2.2Ω ±10% ½W |
| ⚠R717 | 1 | 1 | 1 | 1 | 1 | GA05047010 | 4.7Ω 1W |
| ⚠R718 | 1 | 1 | 1 | 1 | 1 | GA05047010 | 4.7Ω 1W |
| R719 | 1 | 1 | 1 | 1 | 1 | GG05101120 | 100Ω ½W |
| R720 | 1 | 1 | 1 | 1 | 1 | GD05100140 | 10Ω |
| ⚠R801 | 1 | 1 | 1 | 1 | 1 | GP05470050 | 47Ω 5W |
| ⚠R802 | 1 | 1 | 1 | 1 | 1 | GD05562140 | 5.6KΩ |
| R804 | 1 | 1 | 1 | 1 | 1 | GA05271020 | 270Ω 2W |
| R805 | 1 | 1 | 1 | 1 | 1 | GA05682010 | 6.8KΩ 1W |
| ⚠R806 | 1 | 1 | 1 | 1 | 1 | GA05102010 | 1KΩ 1W |
| ⚠R807 | 1 | 1 | 1 | 1 | 1 | GD05393140 | 39KΩ |
| R808 | 1 | 1 | 1 | 1 | 1 | GD05563140 | 56KΩ |
| ⚠R809 |  | 1 |  |  |  | GA05220020 | 22Ω 2W [L] |
| R810 | 1 | 1 | 1 | 1 | 1 | GD05393140 | 39KΩ |
| R811 | 1 | 1 | 1 | 1 | 1 | GD05123140 | 12KΩ |
| R812 | 1 | 1 | 1 | 1 | 1 | RF05100140 | 10Ω, Fusible |
|  |  |  |  |  |  |  | **P700-SEMICONDUCTORS** |
| DN01 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| DN02 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| DN03 | 1 | 1 | 1 | 1 | 1 | HD30033090 | Zener WZ-052 |
| DN04 | 1 | 1 | 1 | 1 | 1 | HD30012010 | Zener HZ-24-2L |
| DN05 | 1 | 1 | 1 | 1 | 1 | HD20001210 | Diode 1S2473C |
| ⚠D801 | 1 | 1 | 1 | 1 | 1 | HD20008290 | Diode S4VB |
| ⚠D802 | 1 | 1 | 1 | 1 | 1 | HD30013010 | Zener HZ-15L-2 |
| ⚠D803 | 1 | 1 | 1 | 1 | 1 | HD30013010 | Zener HZ-15-2L |
| ⚠D804 | 1 | 1 | 1 | 1 | 1 | HD20015030 | Diode DS-135D |
| ⚠D805 |  | 1 |  |  |  | HD20015030 | Diode DS-135D [L] |
| ⚠D806 | 1 | 1 | 1 | 1 | 1 | HD20015030 | Diode DS-135D |
| D807 | 1 | 1 | 1 | 1 | 1 | HD20015030 | Diode DS-135D |
| QN01 | 1 | 1 | 1 | 1 | 1 | HC10008090 | IC NJM-4558D |
| QN02 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| QN03 | 1 | 1 | 1 | 1 | 1 | HT107332A0 | Transistor 2SA733(Q or R) |
| QN04 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| QN05 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| QN06 | 1 | 1 | 1 | 1 | 1 | HT309452A0 | Transistor 2SC945(Q or R) |
| Q701 | 1 | 1 | 1 | 1 | 1 | HC10087030 | IC STK-3042-MARK2 |
| Q702 | 1 | 1 | 1 | 1 | 1 | HC10097030 | IC STK-2250 |
| ⚠Q801 | 1 | 1 | 1 | 1 | 1 | HT412652A0 | Transistor 2SD1265(O or P) |
| Q802 | 1 | 1 | 1 | 1 | 1 | HC10031060 | IC UPC78L05 |
| Q803 | 1 | 1 | 1 | 1 | 1 | HT205071Q0 | Transistor 2SB507 |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **P700-MISCELLANEOUS** |
| J701 | 1 | 1 | 1 | 1 | 1 | YJ06002430 | Jack, (3P) |
| J814 | 1 | 1 | 1 | 1 | 1 | YJ06002430 | Jack, (3P) |
| J815 | 1 | 1 | 1 | 1 | 1 | YJ06002440 | Jack, (4P) |
| J816 | 1 | 1 | 1 | 1 | 1 | YJ06002430 | Jack, (3P) |
| LN01 | 1 | 1 | 1 | 1 | 1 | LY20240190 | Relay, DC24V |
| L701 | 1 | 1 | 1 | 1 | 1 | LL23905120 | Choke Coil, 1μH |
| L702 | 1 | 1 | 1 | 1 | 1 | LL23905120 | Choke Coil, 1μH |
| W701 | 1 | 1 | 1 | 1 | 1 | YU02100260 | Jumper Lead, (2P) |
| W702 | 1 | 1 | 1 | 1 | 1 | YU02240260 | Jumper Lead, (2P) |
| | | | | | | | **(SR520, ONLY)**<br>**PC50-DE-EMPHASIS SWITCH CIRCUIT BOARD** |
| PC50 | | | 1 | | | YK123H2870 | P.W. Board, DE-Emphasis Switch |
| | | | 1 | | | ZZ123H8870 | P.W. Board Assembly |
| | | | | | | | **(SR620, ONLY)** |
| PC50 | | | 1 | | 1 | YK125H1970 | P.W. Board, DE-Emphasis Switch |
| | | | 1 | | 1 | ZZ125H8970 | P.W. Board Assembly |
| CC51 | | | 1 | | 1 | DF15103300 | Film Cap. 0.01μF ±5% |
| CC52 | | | 1 | | 1 | DF15103300 | Film Cap. 0.01μF ±5% |
| SC51 | | | 1 | | 1 | SS02020640 | Slide Switch |
| WC51 | | | 1 | | 1 | YU03220260 | Jumper Lead, (3P) |
| | | | | | | | **(SR620, ONLY)**<br>**PD00-CX CONTROL CIRCUIT BOARD** |
| PD00 | 1 | | | | | YN125H2410 | P.W. Board, CX Control |
| | 1 | | | | | ZZ125H2410 | P.W. Board Assembly |
| | | | | | | | **PD00-CAPACITORS** |
| CD01 | 1 | | | | | EA10405030 | Elect 0.1μF 50V |
| CD02 | 1 | | | | | EA10405030 | Elect 0.1μF 50V |
| CD03 | 1 | | | | | EA10602530 | Elect 10μF 25V |
| CD05 | 1 | | | | | EA10602530 | Elect 10μF 25V |
| CD06 | 1 | | | | | EA10602530 | Elect 10μF 25V |
| CD07 | 1 | | | | | EA47601630 | Elect 47μF 16V |
| CD08 | 1 | | | | | EA47601630 | Elect 47μF 16V |
| | | | | | | | **PD00-RESISTORS**<br>**(All Resistors are ±5% & ¼W)** |
| RD01 | 1 | | | | | GD05103140 | 10KΩ |
| RD02 | 1 | | | | | GD05103140 | 10KΩ |
| RD03 | 1 | | | | | GD05103140 | 10KΩ |
| RD04 | 1 | | | | | GD05103140 | 10KΩ |
| RD05 | 1 | | | | | GD05333140 | 33KΩ |
| RD06 | 1 | | | | | GD05153140 | 15KΩ |
| RD07 | 1 | | | | | GD05122140 | 1.2KΩ |
| RD08 | 1 | | | | | GD05333140 | 33KΩ |
| RD09 | 1 | | | | | GD05104140 | 100KΩ |
| RD10 | 1 | | | | | GD05103140 | 10KΩ |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| RD11 | 1 | | | | | GD05154140 | 150KΩ |
| RD12 | 1 | | | | | GD05154140 | 150KΩ |
| RD13 | 1 | | | | | GD05472140 | 4.7KΩ |
| RD14 | 1 | | | | | GD05103140 | 10KΩ |
| RD15 | 1 | | | | | GD05103140 | 10KΩ |
| RD16 | 1 | | | | | GD05104140 | 100KΩ |
| RD17 | 1 | | | | | GD05152140 | 1.5KΩ |
| RD18 | 1 | | | | | GD05333140 | 33KΩ |
| RD19 | 1 | | | | | GD05104140 | 100KΩ |
| RD20 | 1 | | | | | GD05222140 | 2.2KΩ |
| RD21 | 1 | | | | | GD05103140 | 10KΩ |
| RD22 | 1 | | | | | GD05102140 | 1KΩ |
| RD23 | 1 | | | | | GD05102140 | 1KΩ |
| RD24 | 1 | | | | | RD01040160 | 100KΩ(B), Variable |
| RD25 | 1 | | | | | GD05103140 | 10KΩ |
| RD26 | 1 | | | | | GD05103140 | 10KΩ |
| RD27 | 1 | | | | | RA01050120 | 1MΩ, Trimming |
| RD28 | 1 | | | | | RA01050120 | 1MΩ, Trimming |
| RD29 | 1 | | | | | GD05102140 | 1KΩ |
| RD30 | 1 | | | | | GD05102140 | 1KΩ |
| RD31 | 1 | | | | | GD05102140 | 1KΩ |
| RD32 | 1 | | | | | GD05102140 | 1KΩ |
| RD33 | 1 | | | | | RA01030240 | 10KΩ, Trimming |
| RD34 | 1 | | | | | RA01030240 | 10KΩ, Trimming |
| RD35 | 1 | | | | | GD05562140 | 5.6KΩ |
| RD36 | 1 | | | | | GD05562140 | 5.6KΩ |
| RD37 | 1 | | | | | GD05683140 | 68KΩ |
| RD38 | 1 | | | | | GD05683140 | 68KΩ |
| RD39 | 1 | | | | | GD05153140 | 15KΩ |
| RD40 | 1 | | | | | GD05153140 | 15KΩ |
| RD41 | 1 | | | | | GD05104140 | 100KΩ |
| RD42 | 1 | | | | | GD05104140 | 100KΩ |
| RD43 | 1 | | | | | GG05470140 | 47Ω |
| RD44 | 1 | | | | | GG05470140 | 47Ω |
| RD45 | 1 | | | | | GD05103140 | 10KΩ |
| RD46 | 1 | | | | | GD05104140 | 100KΩ |
| RD47 | 1 | | | | | GD05152140 | 1.5KΩ |
| | | | | | | | **PD00-SEMICONDUCTORS** |
| DD01 | | | | | | | |
| ~ | 8 | | | | | HD20001210 | Diode 1S2473 |
| DD08 | | | | | | | |
| QD01 | 1 | | | | | HC10014270 | IC NE5514N |
| QD02 | 1 | | | | | HC10015270 | IC LM324N |
| QD03 | 1 | | | | | HC10016270 | IC NE5517N |
| QD04 | 1 | | | | | HT309452A0 | Transistor 2SC945(Q or R) |
| QD05 | 1 | | | | | HT107332A0 | Transistor 2SA733(Q or R) |
| QD06 | 1 | | | | | HT309452A0 | Transistor 2SC945(Q or R) |
| QD07 | 1 | | | | | HT107332A0 | Transistor 2SA733(Q or R) |
| | | | | | | | **PD00-MISCELLANEOUS** |
| JD01 | 1 | | | | | YJ06002390 | Jack, (5P) |
| JD02 | 1 | | | | | YJ06002430 | Jack, (3P) |
| WD01 | 1 | | | | | YU07100260 | Jumper Lead, (7P) |
| WD02 | 1 | | | | | YU03140260 | Jumper Lead, (3P) |
| WD03 | 1 | | | | | YU02150260 | Jumper Lead, (2P) |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY |  |  |  |  | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  | U | N | E | A | P |  |  |
|  |  |  |  |  |  |  | **(SR620, ONLY)<br>PD50-CX SWITCH CIRCUIT BOARD** |
| PD50 | 1 |  |  |  |  | YN125H2420 | P.W. Board, CX Switch |
|  | 1 |  |  |  |  | ZZ125H2420 | P.W. Board Assembly |
|  |  |  |  |  |  |  | **PD50-CAPACITORS** |
| CD51 | 1 |  |  |  |  | EA10405030 | Elect 0.1µF 50V |
| CD52 | 1 |  |  |  |  | EA10405030 | Elect 0.1µF 50V |
| CD53 | 1 |  |  |  |  | DF15332350 | Film 3300pF ±5% |
| CD54 | 1 |  |  |  |  | DF15332350 | Film 3300pF ±5% |
|  |  |  |  |  |  |  | **PD50-RESISTORS<br>(All Resistors are ±5% & ¼W)** |
| RD51 | 1 |  |  |  |  | GD05104140 | 100KΩ |
| RD52 | 1 |  |  |  |  | GD05104140 | 100KΩ |
| RD53 | 1 |  |  |  |  | RM02540460 | 250KΩ(B), Variable |
| RD55 | 1 |  |  |  |  | GD05103140 | 10KΩ |
| RD56 | 1 |  |  |  |  | GD05103140 | 10KΩ |
| RD57 | 1 |  |  |  |  | GD05103140 | 10KΩ |
| RD58 | 1 |  |  |  |  | GD05103140 | 10KΩ |
| RD59 | 1 |  |  |  |  | GD05474140 | 470KΩ |
| RD60 | 1 |  |  |  |  | GD05474140 | 470KΩ |
| RD61 | 1 |  |  |  |  | GD05562140 | 5.6KΩ |
| RD62 | 1 |  |  |  |  | GD05562140 | 5.6KΩ |
| RD63 | 1 |  |  |  |  | GD05104140 | 100KΩ |
| RD64 | 1 |  |  |  |  | GD05104140 | 100KΩ |
| RD65 | 1 |  |  |  |  | GD05152140 | 1.5KΩ |
|  |  |  |  |  |  |  | **PD50-SEMICONDUCTOR** |
| QD51 | 1 |  |  |  |  | HC10014270 | IC NE5514N |
|  |  |  |  |  |  |  | **PD50-MISCELLANEOUS** |
| JD51 | 1 |  |  |  |  | YU06002430 | Jack, (3P) |
| JD52 | 1 |  |  |  |  | YU06002430 | Jack, (3P) |
| SD51 | 1 |  |  |  |  | SP04010420 | Push Switch |
| WD51 | 1 |  |  |  |  | YU02150260 | Jumper Lead, (2P) |
|  |  |  |  |  |  |  | **(SR520/SR520L)<br>PE00-TONE AMP CIRCUIT BOARD** |
| PE00 | 1 | 1 | 1 | 1 |  | YK123H2830 | P.W. Board, Tone Amp. |
|  | 1 |  | 1 |  |  | ZZ123H2830 | P.W. Board Assembly |
|  |  | 1 |  | 1 |  | ZZ123H8830 | P.W. Board Assembly |
|  |  |  |  |  |  |  | **(SR620/SR620L)** |
| PE00 | 1 | 1 | 1 | 1 | 1 | YK125H1930 | P.W. Board, Tone Amp/ Subsonic Filter |
|  | 1 |  | 1 |  | 1 | ZZ125H1930 | P.W. Board Assembly |
|  |  | 1 |  | 1 |  | ZZ125H8930 | P.W. Board Assembly |
|  |  |  |  |  |  |  | **PE00-CAPACITORS** |
| CE01 | 1 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7µF 50V |
| CE02 | 1 | 1 | 1 | 1 | 1 | EA47505030 | Elect 4.7µF 50V |
| CE03 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| CE04 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V |
| CE05 | 1 | 1 | 1 | 1 | 1 | DD15101370 | Ceramic 100pF ±5% |
| CE06 | 1 | 1 | 1 | 1 | 1 | DD15101370 | Ceramic 100pF ±5% |
| CE07 | 1 | 1 | 1 | 1 | 1 | DD15101370 | Ceramic 100pF ±5% |
| CE08 | 1 | 1 | 1 | 1 | 1 | DD15101370 | Ceramic 100pF ±5% |
| CE09 | 1 | 1 | 1 | 1 | 1 | DF15222300 | Film 2200pF ±5% |
| CE10 | 1 | 1 | 1 | 1 | 1 | DF15222300 | Film 2200pF ±5% |

| REF. DESIG. | Q'TY |  |  |  |  | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  | U | N | E | A | P |  |  |
| CE11 | 1 | 1 | 1 | 1 | 1 | DF15562300 | Film 5600pF ±5% |
| CE12 | 1 | 1 | 1 | 1 | 1 | DF15562300 | Film 5600pF ±5% |
| CE13 | 1 | 1 | 1 | 1 | 1 | DF15822300 | Film 8200pF ±5% |
| CE14 | 1 | 1 | 1 | 1 | 1 | DF15822300 | Film 8200pF ±5% |
| CE15 | 1 | 1 | 1 | 1 | 1 | DF15183300 | Film 0.018µF ±5% |
| CE16 | 1 | 1 | 1 | 1 | 1 | DF15183300 | Film 0.018µF ±5% |
| CE17 | 1 | 1 | 1 | 1 | 1 | DF15183300 | Film 0.018µF ±5% |
| CE18 | 1 | 1 | 1 | 1 | 1 | DF15183300 | Film 0.018µF ±5% |
| CE19 | 1 | 1 | 1 | 1 | 1 | DD15560370 | Ceramic 56pF ±5% |
| CE20 | 1 | 1 | 1 | 1 | 1 | DD15560370 | Ceramic 56pF ±5% |
| CE21 | 1 | 1 | 1 | 1 |  | EA33505030 | Elect 3.3µF 50V, [5] |
| CE21 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V, [6] |
| CE22 | 1 | 1 | 1 | 1 |  | EA33505030 | Elect 3.3µF 50V, [5] |
| CE22 | 1 | 1 | 1 | 1 | 1 | EA10602530 | Elect 10µF 25V, [6] |
| CE23 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100µF 16V |
| CE24 | 1 | 1 | 1 | 1 | 1 | EA10701630 | Elect 100µF 16V |
|  |  |  |  |  |  |  | **(SR620/SR620L)** |
| CF01 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1µF 50V |
| CF02 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1µF 50V |
| CF03 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1µF 50V |
| CF04 | 1 | 1 | 1 | 1 | 1 | EA10405030 | Elect 0.1µF 50V |
|  |  |  |  |  |  |  | **PE00-RESISTORS<br>(All Resistors are ±5% & ¼W)** |
| RE01 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| RE02 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| RE03 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| RE04 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| RE05 | 1 | 1 | 1 | 1 | 1 | GD05821140 | 820Ω |
| RE06 | 1 | 1 | 1 | 1 | 1 | GD05821140 | 820Ω |
| RE07 | 1 | 1 | 1 | 1 |  | GD05472140 | 4.7KΩ, [5] |
| RE07 | 1 | 1 | 1 | 1 | 1 | GD05392140 | 3.9KΩ, [6] |
| RE08 | 1 | 1 | 1 | 1 |  | GD05472140 | 4.7KΩ, [5] |
| RE08 | 1 | 1 | 1 | 1 | 1 | GD05392140 | 3.9KΩ, [6] |
| RE09 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8KΩ |
| RE10 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8KΩ |
| RE11 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8KΩ |
| RE12 | 1 | 1 | 1 | 1 | 1 | GD05682140 | 6.8KΩ |
| RE13 | 1 | 1 | 1 | 1 | 1 | GD05562140 | 5.6KΩ |
| RE14 | 1 | 1 | 1 | 1 | 1 | GD05562140 | 5.6KΩ |
| RE15 | 1 | 1 | 1 | 1 | 1 | GD05562140 | 5.6KΩ |
| RE16 | 1 | 1 | 1 | 1 | 1 | GD05562140 | 5.6KΩ |
| RE17 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| RE18 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| RE19 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RE20 | 1 | 1 | 1 | 1 | 1 | GD05103140 | 10KΩ |
| RE21 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| RE22 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| RE23 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| RE24 | 1 | 1 | 1 | 1 | 1 | GD05223140 | 22KΩ |
| RE25 | 1 | 1 | 1 | 1 | 1 | GD05470140 | 47Ω |
| RE26 | 1 | 1 | 1 | 1 | 1 | GD05470140 | 47Ω |
| RE27 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| RE28 | 1 | 1 | 1 | 1 | 1 | GD05104140 | 100KΩ |
| RE29 | 1 | 1 | 1 | 1 | 1 | RM01040650 | 100KΩ(B), Variable |
| RE30 | 1 | 1 | 1 | 1 | 1 | RM01040650 | 100KΩ(B), Variable |
| RE32 | 1 | 1 | 1 | 1 | 1 | GG05101140 | 100Ω |
| RE33 | 1 | 1 | 1 | 1 | 1 | GG05101140 | 100Ω |

[5] : SR520/SR520L, TYPE
[6] : SR620/SR620L, TYPE
[L] : SR520L/SR620L, TYPE

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **(SR620/SR620L)** |
| RF01 | 1 | 1 | 1 | 1 | 1 | GD05683140 | 68KΩ |
| RF02 | 1 | 1 | 1 | 1 | 1 | GD05683140 | 68KΩ |
| RF03 | 1 | 1 | 1 | 1 | 1 | GD05152140 | 1.5KΩ |
| RF04 | 1 | 1 | 1 | 1 | 1 | GD05152140 | 1.5KΩ |
| RF05 | 1 | 1 | 1 | 1 | 1 | GD05183140 | 18KΩ |
| RF06 | 1 | 1 | 1 | 1 | 1 | GD05183140 | 18KΩ |
| RF07 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| RF08 | 1 | 1 | 1 | 1 | 1 | GD05102140 | 1KΩ |
| | | | | | | | **PE00-SEMICONDUCTORS** |
| QE01 | 1 | 1 | 1 | 1 | 1 | HC10013370 | IC TL-4558 |
| QE02 | 1 | 1 | 1 | 1 | 1 | HC10013370 | IC TL-4558 |
| | | | | | | | **(SR620/SR620L)** |
| QF01 | 1 | 1 | 1 | 1 | 1 | HT406672F0 | Transistor 2SD667A(C or D) |
| QF02 | 1 | 1 | 1 | 1 | 1 | HT406672F0 | Transistor 2SD667A(C or D) |
| | | | | | | | **PE00-MISCELLANEOUS** |
| WE02 | 1 | 1 | 1 | 1 | | YU03060260 | Jumper Lead, (3P); [5] |
| WE02 | 1 | 1 | 1 | 1 | 1 | YU05060260 | Jumper Lead, (5P); [6] |
| WE03 | 1 | 1 | 1 | 1 | 1 | YU03100260 | Jumper Lead, (3P) |
| | | | | | | | **(SR520/SR520L)**<br>**PG00-VOLUME/BALANCE CIRCUIT BOARD** |
| PG00 | 1 | 1 | 1 | 1 | | YK123H2880 | P.W. Board, Volume/Balance |
| | 1 | 1 | 1 | 1 | | ZZ123H2880 | P.W. Board Assembly |
| | | | | | | | **(SR620/SR620L)** |
| PG00 | 1 | 1 | 1 | 1 | 1 | YK125H1980 | P.W. Board, Volume/Balance |
| | 1 | 1 | 1 | 1 | 1 | ZZ125H1980 | P.W. Board Assembly |
| RG01 | 1 | 1 | 1 | 1 | 1 | RM01040270 | Variable Resistor, 100KΩ |
| RG02 | 1 | 1 | 1 | 1 | 1 | RK02040190 | Variable Resistor, 200KΩ |
| WG01 | 1 | 1 | 1 | 1 | 1 | YU05100260 | Jumper Lead, (5P) |
| | | | | | | | **(SR520/SR520L)**<br>**PT00-SPEAKER SW./ HEADPHONE CIRCUIT BOARD** |
| PT00 | 1 | 1 | 1 | 1 | | YK123H2840 | P.W. Board, Speaker SW./ Headphone |
| | 1 | 1 | 1 | 1 | | ZZ123H2840 | P.W. Board Assembly |
| | | | | | | | **(SR620/SR620L)** |
| PT00 | 1 | 1 | 1 | 1 | 1 | YK125H1940 | P.W. Board, Speaker SW./ Headphone |
| | 1 | 1 | 1 | 1 | 1 | ZZ125H1940 | P.W. Board Assembly |
| ⚠RT01 | 1 | 1 | 1 | 1 | | GA05331010 | Resistor 330Ω ±5% 1W, [5] |
| ⚠RT01 | 1 | 1 | 1 | 1 | 1 | GA05331020 | Resistor 330Ω ±5% 2W, [6] |
| ⚠RT02 | 1 | 1 | 1 | 1 | | GA05331010 | Resistor 330Ω ±5% 1W, [5] |
| ⚠RT02 | 1 | 1 | 1 | 1 | 1 | GA05331020 | Resistor 330Ω ±5% 2W, [6] |
| JT08 | 1 | 1 | 1 | 1 | 1 | YJ01001790 | Jack, Headphone |
| ST01 | 1 | 1 | 1 | 1 | 1 | SP02020650 | Push Switch, Speaker |

| REF. DESIG. | Q'TY | | | | | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | U | N | E | A | P | | |
| | | | | | | | **(SR520/SR520L)**<br>**PU00-POWER SWITCH CIRCUIT BOARD** |
| PU00 | 1 | 1 | 1 | 1 | | YK123H2860 | P.W. Board, Power Switch |
| | 1 | | | | | ZZ123H2860 | P.W. Board Assembly |
| | | 1 | 1 | 1 | | ZZ123H8860 | P.W. Board Assembly |
| | | | | | | | **(SR620/SR620L)** |
| PU00 | 1 | 1 | 1 | 1 | 1 | YK125H1960 | P.W. Board, Power Switch |
| | 1 | | | | | ZZ125H1960 | P.W. Board Assembly |
| | | 1 | 1 | 1 | | ZZ125H8960 | P.W. Board Assembly |
| | | | | | 1 | ZZ125H7960 | P.W. Board Assembly |
| ⚠G001 | 1 | | | | | DK18103530 | Ceramic Cap. 0.01μF 125V |
| ⚠G001 | | 1 | 1 | 1 | | DK18103840 | Ceramic Cap. 0.01μF 400V |
| ⚠G001 | | | | | 1 | DK18103850 | Ceramic Cap. 0.01μF 400V |
| ⚠S001 | 1 | | | | | SP01010420 | Push Switch, Power; [5] |
| ⚠S001 | 1 | | | | | SP01010240 | Push Switch, Power; [6] |
| ⚠S001 | | 1 | 1 | 1 | | SP01010390 | Push Switch, Power |
| ⚠S001 | | | | | 1 | SP01010430 | Push Switch, Power |
| | | | | | | | **(SR620/SR620L)**<br>**PV00-TAPE 2 MONITOR CIRCUIT BOARD** |
| PV00 | 1 | 1 | 1 | 1 | 1 | YK125H1990 | P.W. Board, Tape 2 Monitor |
| | 1 | 1 | 1 | 1 | 1 | ZZ125H1990 | P.W. Board Assembly |
| JV01 | 1 | | | | 1 | YT02040480 | Terminal, (4P); Gold |
| JV01 | | 1 | 1 | 1 | | YT02040470 | Terminal, (4P) |
| WV01 | 1 | 1 | 1 | 1 | 1 | YU07260260 | Jumper Lead, (7P) |
| | | | | | | | **(SR520/SR520L)**<br>**PW00-SPEAKER TERMINAL CIRCUIT BOARD** |
| PW00 | 1 | 1 | 1 | 1 | | YK123H2850 | P.W. Board, Speaker Terminal |
| | 1 | 1 | 1 | 1 | | ZZ123H2850 | P.W. Board Assembly |
| JW04 | 1 | 1 | 1 | 1 | | YT03080020 | Terminal, (8P) |
| | | | | | | | **(SR620/SR620L)**<br>**PW00-SPEAKER TERMINAL CIRCUIT BOARD** |
| PW00 | 1 | 1 | 1 | 1 | 1 | YK125H1950 | P.W. Board, Speaker Terminal |
| | 1 | 1 | 1 | 1 | 1 | ZZ125H1950 | P.W. Board Assembly |
| JW07 | 1 | 1 | 1 | 1 | 1 | YT03080020 | Terminal, (8P) |

- (U): for U.S.A.
- (N): for Europe
- (E): for Europe
- (A): for Australia
- (P): for PX

| REF. DESIG. | Q'TY U | N | E | A | P | PART NO. | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | | | | | | | **(SR620, ONLY)**<br>**PZ00-CAL. L.E.D.**<br>**CIRCUIT BOARD** |
| PZ00 | 1 | | | | | YN125H2430 | P.W. Board, CAL. L.E.D. |
| | 1 | | | | | ZZ125H2430 | P.W. Board Assembly |
| QZ01 | 1 | | | | | HI10031030 | L.E.D. SLP-153B |
| QZ02 | 1 | | | | | HI10031030 | L.E.D. SLP-153B |
| | | | | | | | **(SR620, ONLY)**<br>**PZ51-IND. L.E.D.**<br>**CIRCUIT BOARD** |
| PZ51 | 1 | | | | | YK125H2440 | P.W. Board, IND. L.E.D. |
| | 1 | | | | | ZZ125H2440 | P.W. Board Assembly |
| QZ51 | 1 | | | | | HI10031030 | L.E.D. SLP-153B |

| | |
|---|---|
| (W01-99) | Assembly and Wiring |
| (T01-99) | Adjustment |
| (X01-00) | Correction |

**NOTE ON SAFETY:**

**Symbol ⚠. Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.**

# 13. TECHNICAL SPECIFICATIONS

## MODEL SR620/SR620L

### AUDIO SECTION

| | |
|---|---|
| **POWER OUTPUT PER CHANNEL** | |
| **4 OHMS DIN** | **65 W** |
| **4 OHMS RMS** | **60 W** |
| **8 OHMS DIN** | **60 W** |
| **8 OHMS RMS** | **55 W** |
| **TOTAL HARMONIC DISTORTION AT RMS 8 OHMS** | **0.03%** |
| **DAMPING FACTOR 8 OHMS (1 kHz)** | **50** |

| | |
|---|---|
| Frequency Response | |
| Phono (RIAA) | ±1.0 dB (20 Hz ~ 20 kHz) |
| Aux (±2 dB) | 10 Hz ~ 35 kHz |
| Signal-to-Noise Ratio | |
| Phono (7.75 mV, 20 V output) | 85 dB |
| Aux (Vol. Max., 20 V output) | 95 dB |
| Input Terminals | |
| Phono: Input Sensitivity/Impedance | 2.8 mV/47 kohms |
| Aux: Input Sensitivity/Impedance | 160 mV/25 kohms |

### FM TUNER SECTION

| | |
|---|---|
| Frequency Range | 87.5 ~ 108 MHz |
| Usable Sensitivity | |
| DIN Mono (S/N 26 dB, 300 ohms) | 1.8 μV |
| DIN Stereo (S/N 46 dB, 300 ohms) | 40 μV |
| Alternate Channel Selectivity, 98 MHz | 63 dB |
| Signal-to-Noise Ratio, 98 MHz | |
| Unweighted: Mono | 75 dB |
| Stereo | 65 dB |
| Weighted: Mono | 78 dB |
| Stereo | 68 dB |

### MW TUNER SECTION

| | |
|---|---|
| Frequency Range | 525 ~ 1605 kHz |
| Usable Sensitivity (20 dB S/N 30% Mod., 1 MHz) | 30 μV/450 μV/m |
| Selectivity (9 kHz/18 kHz) | 30 dB/44 dB |

### LW TUNER SECTION

| | |
|---|---|
| Frequency Range | 150 ~ 350 kHz |
| Usable Sensitivity (20 dB S/N 30% 250 kHz) | 100 μV/1500 μV/m |

### GENERAL

| | |
|---|---|
| Power Requirements | |
| N version | 220/240 V AC, 50/60 Hz |
| T version | 220/240 V AC, 50/60 Hz |
| E, P version | 110/120/220/240 V AC, 50/60 Hz |
| Power Consumption at Rated Output, Both Channels Operating | 220 W |
| Dimensions | |
| Panel Width | 416 mm |
| Panel Height | 100 mm |
| Depth | 300 mm |
| Weight | |
| Unit alone | 6.9 kg |

* All powers at 1 kHz

Specifications and apperance are subject to change for modification without notice.

## MODEL SR620CX

### AMPLIFIER SECTION:

| | |
|---|---|
| Rated Power Output, Minimum Continuous Watts per Channel from 20 Hz to 20 kHz, both Channels driven | |
| into 8 ohms | 46W |
| into 4 ohms | 55W |
| Total Harmonic Distortion | |
| at 8 ohms | 0.03% |
| at 4 ohms | 0.06% |
| I.M. Distortion (IHF method, 60 Hz and 7 kHz mixed 4:1 at rated power output) | |
| at 8 ohms | 0.025% |
| at 4 ohms | 0.05% |
| Damping Factor at 20 Hz | 50 |

### PREAMPLIFIER SECTION:

| | |
|---|---|
| Phono | |
| Input Overload at 1 kHz | 130 mV |
| Equivalent Input Noise, "A" weighted | 0.7 μV |
| Input Sensitivity (Input Impedance, 47k ohms) | 2.8 mV |
| Frequency Response (RIAA 20 Hz to 20 kHz) | ±1.5 dB |
| Signal-to-Noise Ratio "A" weighted (at rated output and 10 mV input) | 83 dB |
| High Level Inputs (Aux and Tape) | |
| Input Sensitivity | 160 mV |
| Input Impedance | 25k ohms |
| Frequency Response | 16 Hz – 30 kHz ±2 dB |
| Signal-to-Noise Ratio "A" weighted (at rated output and 775 mV input) | 96 dB |
| Output Impedance Tape Out | 220 ohms |

### FM TUNER SECTION:

| | |
|---|---|
| Sensitivity | |
| IHF Usable | 10.2 dBf (1.8 μV) |
| IHF 50 dB Quieting (Mono) | 14.5 dBf (2.9 μV) |
| (Stereo) | 38.3 dBf (45 μV) |
| Quieting Slope (Mono) | |
| RF Input for 30 dB Quieting | 10.8 dBf (1.9 μV) |
| Quieting at: | |
| 20 dBf ( 5.5 μV) | 55 dB |
| 25 dBf ( 10 μV) | 60 dB |
| 40 dBf ( 55 μV) | 70 dB |
| 65 dBf (1000 μV) | 75 dB |
| Quieting Slope (Stereo) | |
| Quieting at: | |
| 30 dBf ( 17 μV) | 40 dB |
| 40 dBf ( 55 μV) | 50 dB |
| 50 dBf ( 173 μV) | 58 dB |
| 65 dBf (1000 μV) | 65 dB |
| Distortion (Mono) at 65 dBf (1000 μV) | |
| 100 Hz | 0.2% |
| 1000 Hz | 0.15% |
| 6000 Hz | 0.25% |
| Distortion (Stereo) at 65 dBf (1000 μV) | |
| 100 Hz | 0.2% |
| 1000 Hz | 0.1% |
| 6000 Hz | 0.25% |
| Stereo Separation | |
| 100 Hz | 42 dB |
| 1000 Hz | 45 dB |
| 10000 Hz | 40 dB |

| | |
|---|---|
| Capture Ratio at 65 dBf (1000 μV) | 1.0 dB |
| Frequency Response | |
| 30 Hz to 15 kHz | |
| Mono and Stereo | +0.5 dB/−1.5 dB |
| Alternate Channel Selectivity | 60 dB |
| Spurious Response Rejection | 90 dB |
| Image Response Rejection | 50 dB |
| I.F. Rejection (Balanced) | 80 dB |
| A.M. Suppression | 50 dB |
| Subcarrier Rejection | 52 dB |

## AM TUNER SECTION:

| | |
|---|---|
| IHF Usable Sensitivity | 20 μV |
| Signal-to-Noise Ratio | 50 dB |
| Alternate Channel Selectivity | 44 dB |
| Image Rejection | 45 dB |
| Spurious Response Rejection | 46 dB |
| I.F. Rejection | 40 dB |

## GENERAL:

| | |
|---|---|
| Power Requirements | 120V 60 Hz |
| Power Consumption at rated output, both channels operating | 220W |
| Idling Power (Volume Control at zero) | 28W |
| Dimensions | |
| Panel Width | 16-3/8" (416 mm) |
| Panel Height | 4" (100 mm) |
| Depth | 12" (300 mm) |
| Weight | |
| Unit Alone | 13 lbs 12 oz (6.3 kg) |
| Packed for Shipment | 15 lbs 84 oz (7.2 kg) |

Specifications and apperance are subject to change for modification without notice.

# MODEL SR520/SR520L

## AUDIO SECTION

| | |
|---|---|
| **POWER OUTPUT PER CHANNEL** | |
| **4 OHMS DIN** | **50 W** |
| **4 OHMS RMS** | **45 W** |
| **8 OHMS DIN** | **45 W** |
| **8 OHMS RMS** | **40 W** |
| **TOTAL HARMONIC DISTORTION AT RMS 8 OHMS** | **0.03%** |
| **DAMPING FACTOR 8 OHMS (1 kHz)** | **50** |

| | | |
|---|---|---|
| Frequency Response | | |
| Phono | (RIAA) | ±1.0 dB (20 Hz ~ 20 kHz) |
| Aux | (±2 dB) | 10 Hz ~ 35 kHz |
| Signal-to-Noise Ratio | | |
| Phono | (7.75 mV, 20 V output) | 80 dB |
| Aux | (Vol. Max., 20 V output) | 90 dB |
| Input Terminals | | |
| Phono: | Input Sensitivity/Impedance | 2.8 mV/47 kohms |
| Aux: | Input Sensitivity/Impedance | 160 mV/25 kohms |

## FM TUNER SECTION

| | | |
|---|---|---|
| Frequency Range | | 87.5 ~ 108 MHz |
| Usable Sensitivity | | |
| DIN Mono (S/N 26 dB, 300 ohms) | | 1.8 μV |
| DIN Stereo (S/N 46 dB, 300 ohms) | | 40 μV |
| Alternate Channel Selectivity, 98 MHz | | 63 dB |
| Signal-to-Noise Ratio, 98 MHz | | |
| Unweighted: | Mono | 75 dB |
| | Stereo | 65 dB |
| Weighted: | Mono | 78 dB |
| | Stereo | 68 dB |

## MW TUNER SECTION

| | |
|---|---|
| Frequency Range | 525 ~ 1605 kHz |
| Usable Sensitivity (20 dB S/N 30% Mod., 1 MHz) | 30 μV/450 μV/m |
| Selectivity (9 kHz/18 kHz) | 30 dB/44 dB |

## LW TUNER SECTION

| | |
|---|---|
| Frequency Range | 150 ~ 350 kHz |
| Usable Sensitivity (20 dB S/N 30% 250 kHz) | 100 μV/1500 μV/m |

## GENERAL

| | |
|---|---|
| Power Requirements | |
| N version | 220/240 V AC, 50/60 Hz |
| T version | 220/240 V AC, 50/60 Hz |
| E version | 110/120/220/240 V AC, 50/60 Hz |
| Power Consumption at Rated Output, Both Channels Operating | 120 W |
| Dimensions | |
| Panel Width | 416 mm |
| Panel Height | 100 mm |
| Depth | 300 mm |
| Weight | |
| Unit alone | 6.2 kg |

* All powers at 1 kHz

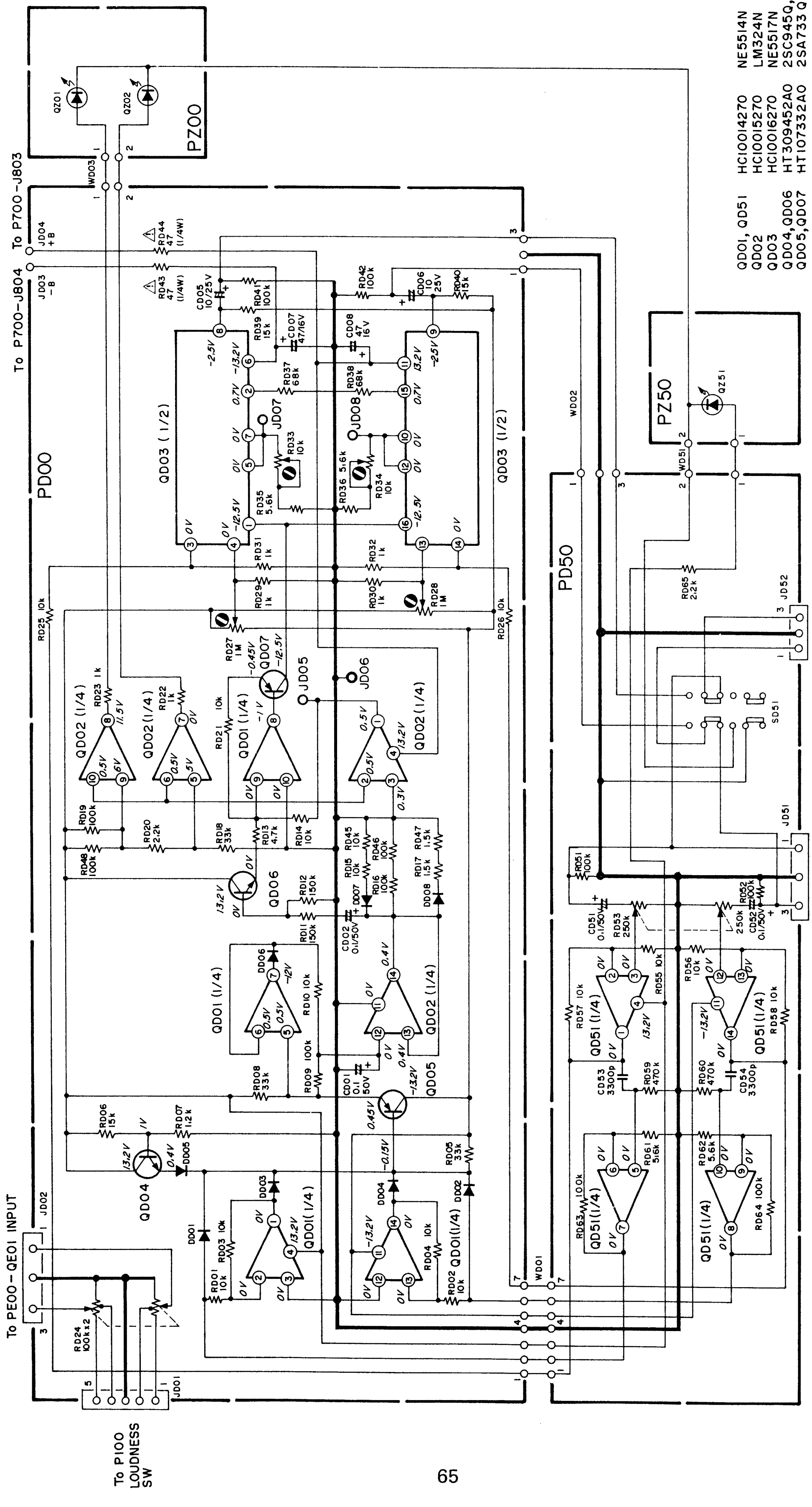
Specifications and apperance are subject to change for modification without notice.

# MEMORANDUM

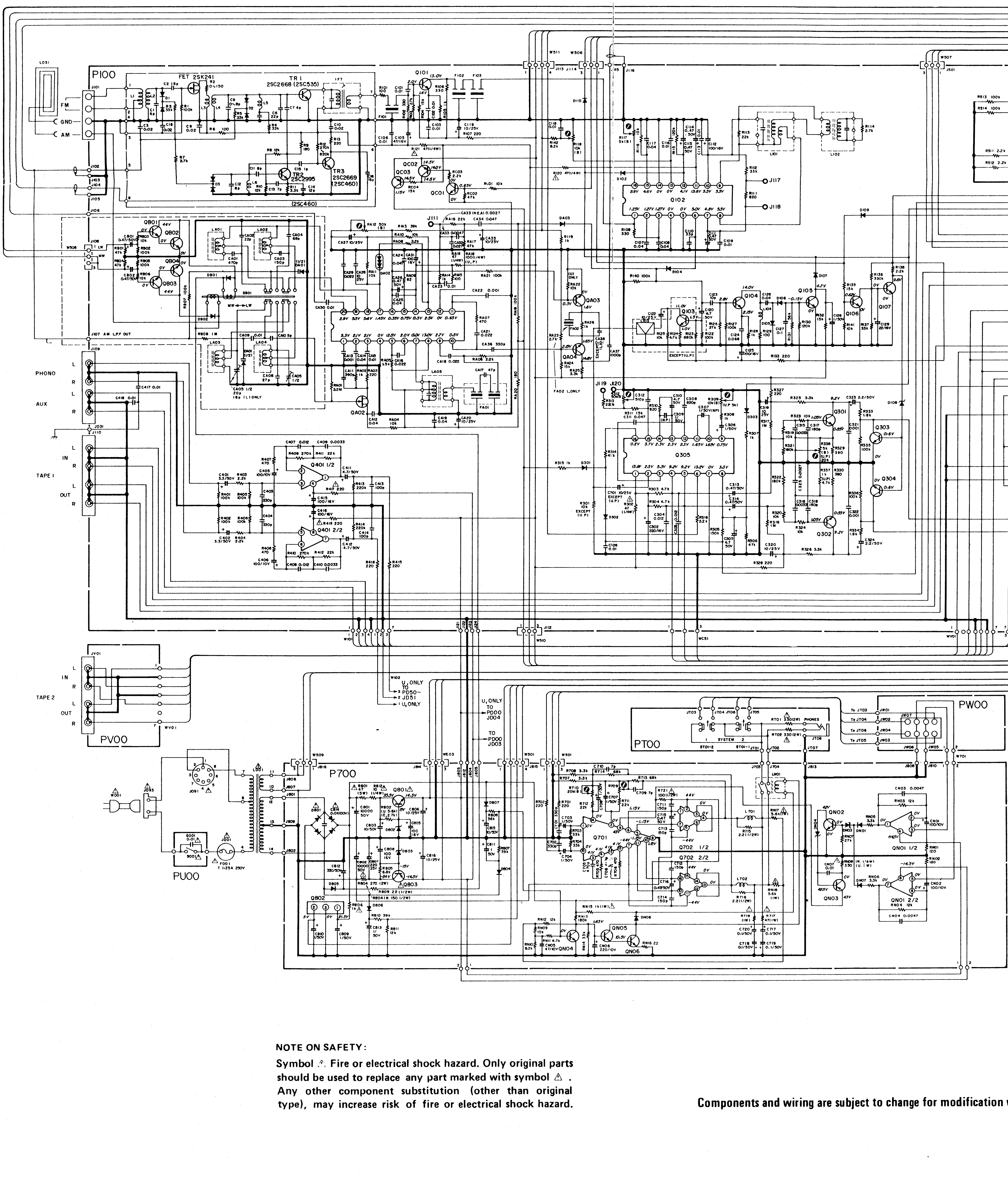
## 14. SCHEMATIC DIAGRAM

# Model SR620CX

| | | |
|---|---|---|
| QD01, QD51 | HC10014270 | NE5514N |
| QD02 | HC10015270 | LM324N |
| QD03 | HC10016270 | NE5517N |
| QD04,QD06 | HT309452A0 | 2SC945Q,R |
| QD05,QD07 | HT107332A0 | 2SA733 Q,R |
| DD01~DD08 | HD20001210 | 1S2473 |
| QZ01, QZ02<br>QZ51 | HD10031030 | SLP-153B |



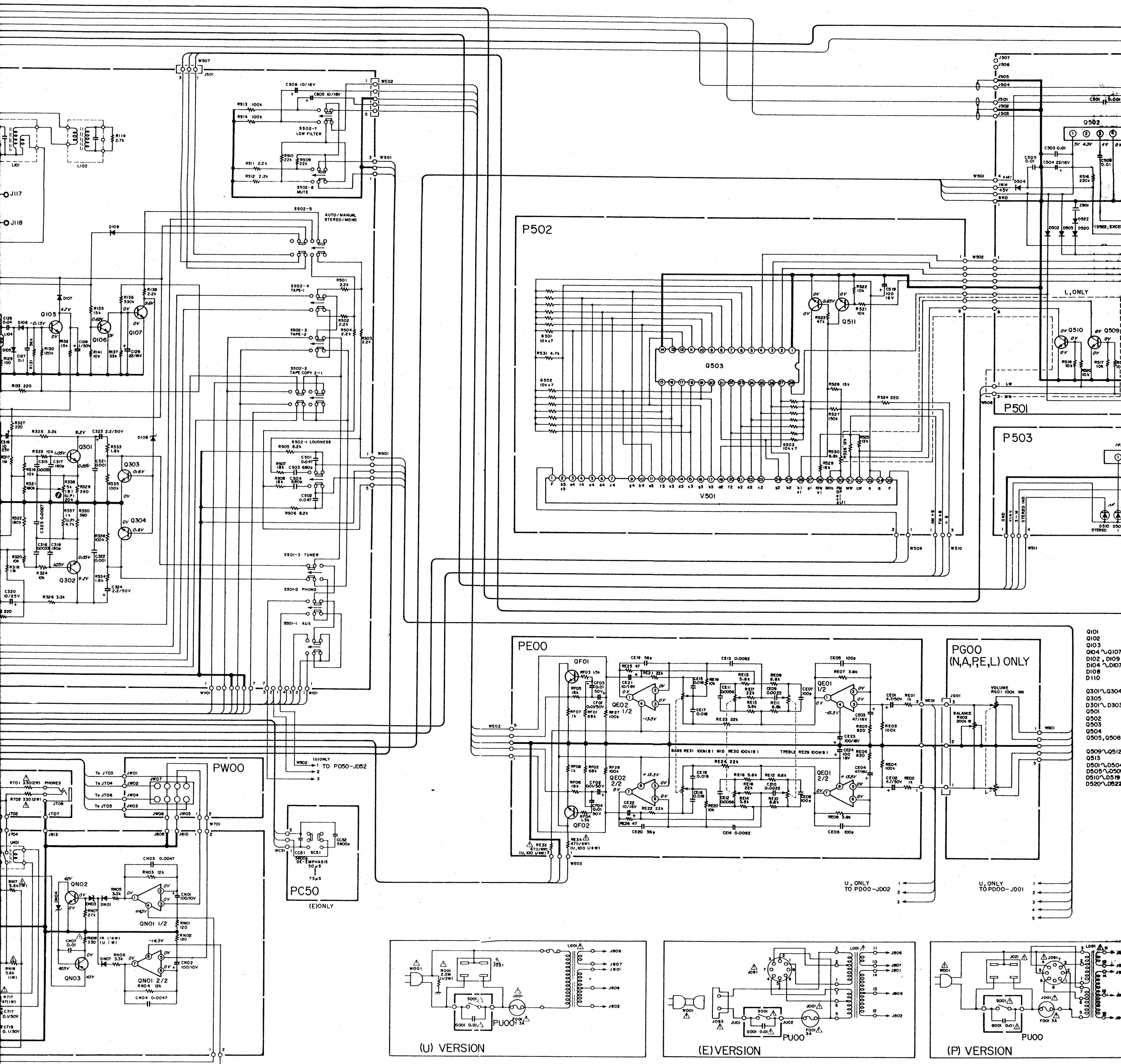
PZ00
QZ01
QZ02
WD03
To P700-J803
To P700-J804
JD04 +B
JD03 -B
RD44 47 (1/4W)
RD43 47 (1/4W)
PD00
CD05 10/25V
RD41 100k
RD39 15k
CD07 47/16V
RD37 68k
RD42 100k
CD06 10 25V
RD40 15k
CD08 47 16V
RD38 68k
QD03 (1/2)
JD07
JD08
RD33 10k
RD34 10k
RD35 5.6k
RD36 5.6k
RD31 1k
RD32 1k
RD29 1k
RD30 1k
RD28 1M
RD27 1M
RD25 10k
RD26 10k
QD07
JD05
JD06
QD02 (1/4)
QD01 (1/4)
RD23 1k
RD22 1k
RD21 10k
RD19 100k
RD20 2.2k
RD18 33k
RD13 4.7k
RD14 10k
RD48 100k
RD45 10k
RD46 100k
RD15 10k
RD16 100k
RD17 1.5k
RD47 1.5k
QD06
RD12 150k
RD11 150k
CD02 0.1/50V
DD07
DD08
DD06
RD10 10k
RD09 100k
RD08 33k
CD01 0.1 50V
QD05
RD06 15k
RD07 1.2k
RD05 33k
QD04
DD05
DD03
DD04
DD02
DD01
RD03 10k
RD01 10k
RD04 10k
RD02 10k
To PE00-QE01 INPUT
JD02
RD24 100k×2
JD01
To P100 LOUDNESS SW
WD01
WD02
PD50
PZ50
QZ51
WD51
RD65 2.2k
JD52
To P100-PHONO SW
SD51
JD51
To P100-PHONO AMP OUT
RD51 100k
RD52 100k
CD51 0.1/50V
CD52 0.1/50V
RD53 250k
250k
RD55 10k
RD56 10k
RD57 10k
RD58 10k
QD51 (1/4)
CD53 3300p
CD54 3300p
RD59 470k
RD60 470k
RD61 5.6k
RD62 5.6k
RD63 100k
RD64 100k

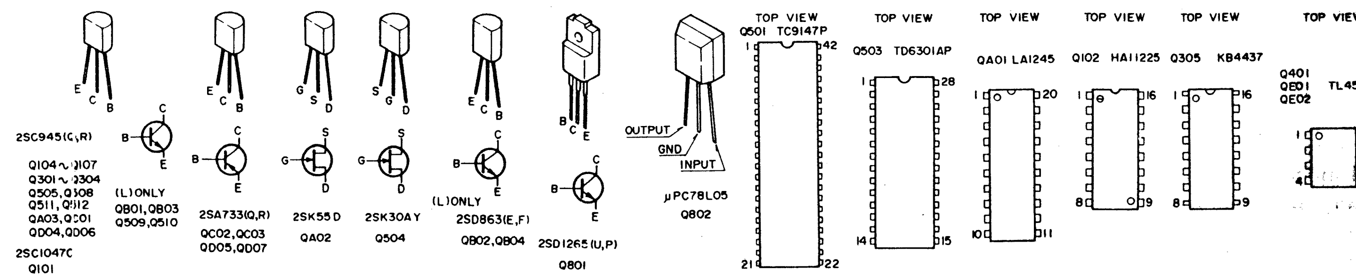

P100
FET 2SK241
TR1 2SC2668 (2SC535)
TR2 2SC2995
TR3 2SC2669 (2SC460)
(2SC460)
L051
FM
GND
AM
Q101
Q102
QC01
QC02
QC03
Q801
Q802
Q803
Q804
QA02
QA03
QA04
Q103
Q104
Q105
Q106
Q107
J111
J117
J118
J119
J120
Q305
Q301
Q302
Q303
Q304
J107 AM L.P.F OUT
PHONO
AUX
TAPE 1
IN
OUT
Q401 1/2
Q401 2/2
TAPE 2
PV00
U1 ONLY TO PD50- J051
U1 ONLY TO PD00 JD04
TO PD00 JD03
P700
PU00
F001 T 1.25A 250V
Q701
Q702 1/2
Q702 2/2
QN01 1/2
QN01 2/2
QN02
QN03
QN04
QN05
QN06
PT00
PHONES
SYSTEM
PW00
EXCEPT (U.P)
W101
W102
W501
W506
W507
W509
W510
W511
WC51
WE03
WV01
W701

NOTE ON SAFETY:

Symbol ⚠. Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

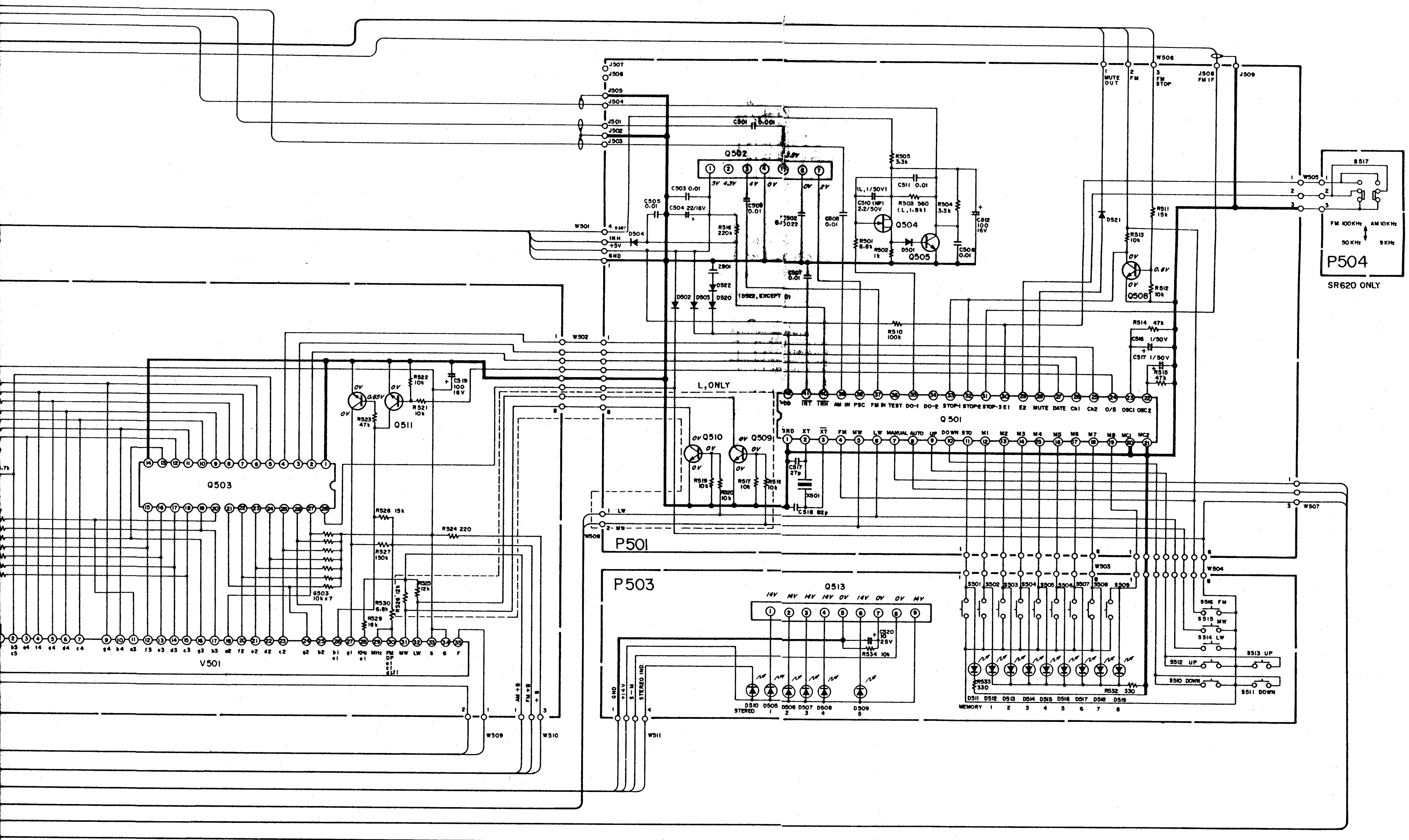
**Components and wiring are subject to change for modification**


P502
Q503
V501
P501
P503
PE00
QF01
QF02
QE01 1/2
QE01 2/2
QE02 1/2
QE02 2/2
PG00
(N,A,P,E,L) ONLY
PW00
PC50
(E)ONLY
DE-EMPHASIS
QN01 1/2
QN01 2/2
QN02
QN03
Q301
Q302
Q303
Q304
Q105
Q106
Q107
Q510
Q509
Q511
Q502
J117
J118
L101
L102
U, ONLY
TO PD00-JD02
U, ONLY
TO PD00-JD01
TO PD50-JD52
L,ONLY
S502-7 LOW FILTER
S502-6 MUTE
S502-5 AUTO/MANUAL STEREO/MONO
S502-4 TAPE-1
S502-3 TAPE-2
S502-2 TAPE COPY 2→1
S502-1 LOUDNESS
S501-3 TUNER
S501-2 PHONO
S501-1 AUX
VOLUME
BALANCE
BASS
MID
TREBLE
PHONES
D510 STEREO
PU00
(U) VERSION
(E) VERSION
(P) VERSION

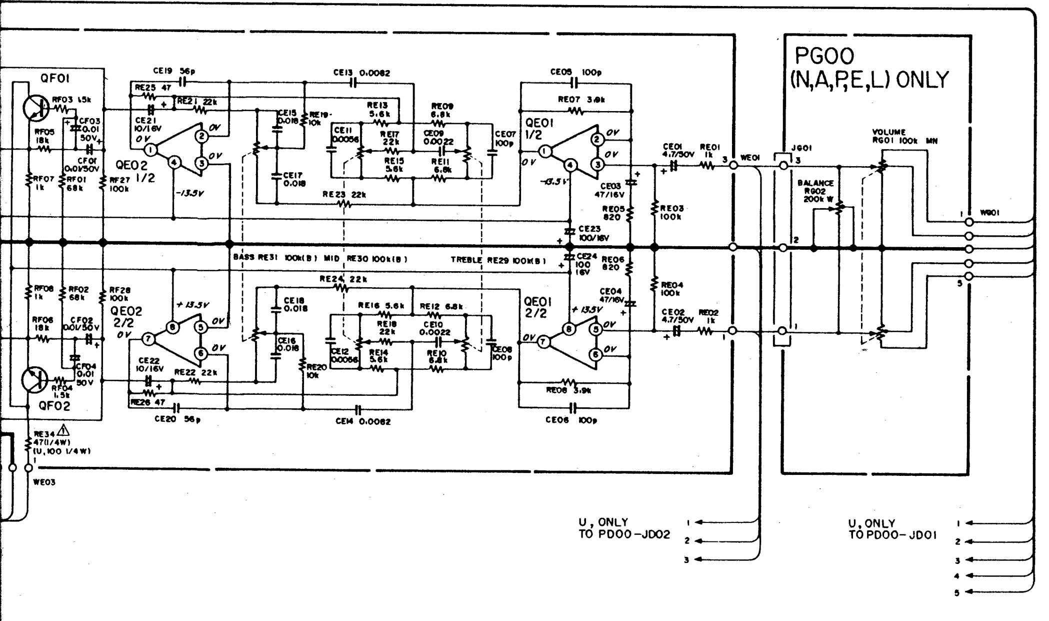

2SC945(Q,R)
Q104～Q107
Q301～Q304
Q505,Q108
Q511,Q112
QA03,QC01
QD04,QD06
2SC1047C
Q101
(L)ONLY
Q801,Q803
Q509,Q510
2SA733(Q,R)
QC02,QC03
QD05,QD07
2SK55D
QA02
2SK30AY
Q504
(L)ONLY
2SD863(E,F)
Q802,Q804
2SD1265(U,P)
Q801
OUTPUT
GND
INPUT
μPC78L05
Q802
TOP VIEW
Q501 TC9147P
Q503 TD6301AP
QA01 LA1245
Q102 HA11225
Q305 KB4437
Q401
QE01
QE02

nd wiring are subject to change for modification without notice.

# Model SR620/SR620L

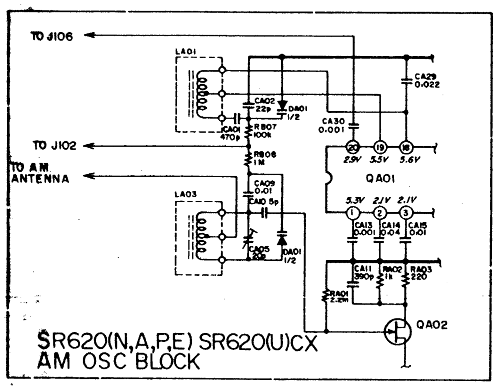


P504
SR620 ONLY
S517
FM 100KHz AM 10KHz
50KHz 9KHz
P501
P503
L, ONLY
Q501
Q502
Q503
Q504
Q505
Q508
Q509
Q510
Q511
Q513
V501
W501
W502
W503
W504
W505
W506
W507
W508
W509
W510
W511
MEMORY 1 2 3 4 5 6 7 8
S510 DOWN
S511 DOWN
S512 UP
S513 UP
S514 LW
S515 MW
S516 FM
STEREO

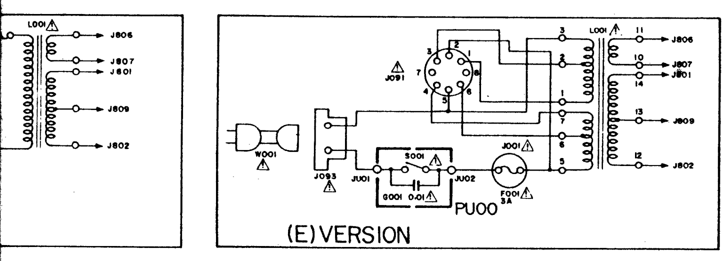


QF01
QF02
QE01 1/2
QE01 2/2
QE02 1/2
QE02 2/2
PG00
(N,A,P,E,L) ONLY
VOLUME RG01 100k MN
BALANCE RG02 200k M
TREBLE RE29 100k(B)
BASS RE31 100k(B) MID RE30 100k(B)
U, ONLY TO PD00-JD02
U, ONLY TO PD00-JD01
WE01
WE03

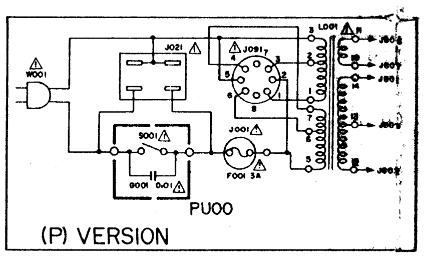
| | | |
|---|---|---|
| Q101 | HT310471C1 | 2SC1047C |
| Q102 | HC10033010 | HA11225 |
| Q103 | HT309452A0 | 2SC945 Q,R |
| Q104~Q107 | HT309452A1 | 2SC945 Q,R |
| D102, D109<br>D104~D107 | HD20001211 | 1S2473 |
| D108<br>D110 | HD30029090 | WZ-090 |
| Q301~Q304 | HT309452A1 | 2SC945 Q,R |
| Q305 | HC10001420 | KB4437 |
| D301~D303 | HD20001211 | 1S2473 |
| Q501 | HC10070050 | TC9147P |
| Q502 | HC10072050 | TD6104AP |
| Q503 | HC10071050 | TD6301AP |
| Q504 | HF20030100 | 2SK30AY |
| Q505, Q508 | HT309452A1 | 2SC945 Q,R |
| Q509~Q512 | HT309452A0 | 2SC945 Q,R |
| Q513 | HC10098030 | LB1413 |
| D501~D504 | HD20001211 | 1S2473 |
| D505~D509 | HI10031020 | LN324GP |
| D510~D519 | HI10030020 | LN224RP |
| D520~D522 | HD10002020 | OA90 |
| Q701 | HC10087030 | STK-3042 Ⅱ |
| Q702 | HC10097030 | STK-2250 |
| Q801 | HT412652A0 | 2SD1265 Q,R |
| Q802 | HC10031060 | μPC78L05 |
| Q803 | HT20517100 | 2SB517E |
| D801 | HD20008290 | S4VB |
| D802, D803 | HD30013010 | HZ-15-2L |
| D804~D807 | HD20010530 | DS-135D |
| QA01 | HC10058030 | LA1245 |
| QA02 | HF200551D0 | 2SK55D |
| QA03 | HT309452A1 | 2SC945 Q,R |
| QA04 | HT308291C1 | 2SC829C |
| DA01 | HD40003420 | KV-1236Z3 |
| DA02 | HV00006120 | MV-203 |
| DA03, DA04 | HD20001211 | 1S2473 |
| QB01, QB03 | HT309452A0 | 2SC945 Q,R |
| QB02, QB04 | HT408632B0 | 2SD863E,F |
| DB01, DB02 | HD20015030 | DS-135D |
| QC01 | HT309452A0 | 2SC945 Q,R |
| QC02, QC03 | HT107332A0 | 2SA733Q,R |
| QE01, QE02 | HC10013370 | TL-4558 |
| QF01, QF02 | HT406672F0 | 2SD667A C,R |
| QN01 | HC10008090 | NJM4558 |
| QN02<br>QN04~QN06 | HT309452A1 | 2SC945 Q,R |
| QN03 | HT107332A1 | 2SA733 Q,R |
| DN01, DN02<br>DN05 | HD20001211 | 1S2473 |
| DN03 | HD30033090 | WZ-052 |
| DN04 | HD30012010 | HZ-24-2L |



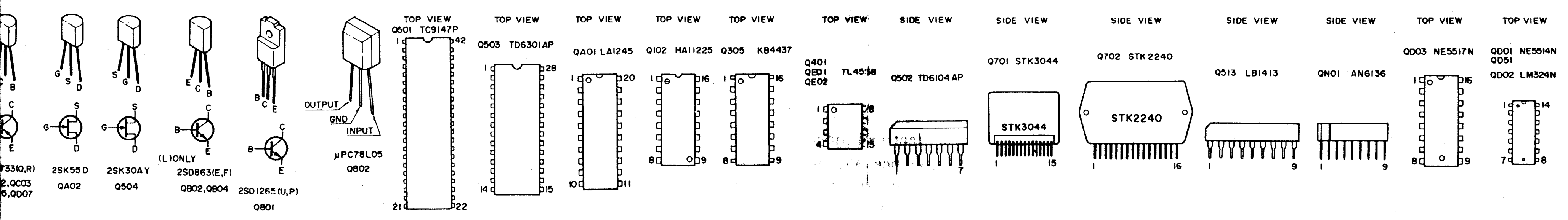
TO J106
TO J102
TO AM ANTENNA
LA01
LA03
QA01
QA02
SR620(N,A,P,E) SR620(U)CX
AM OSC BLOCK



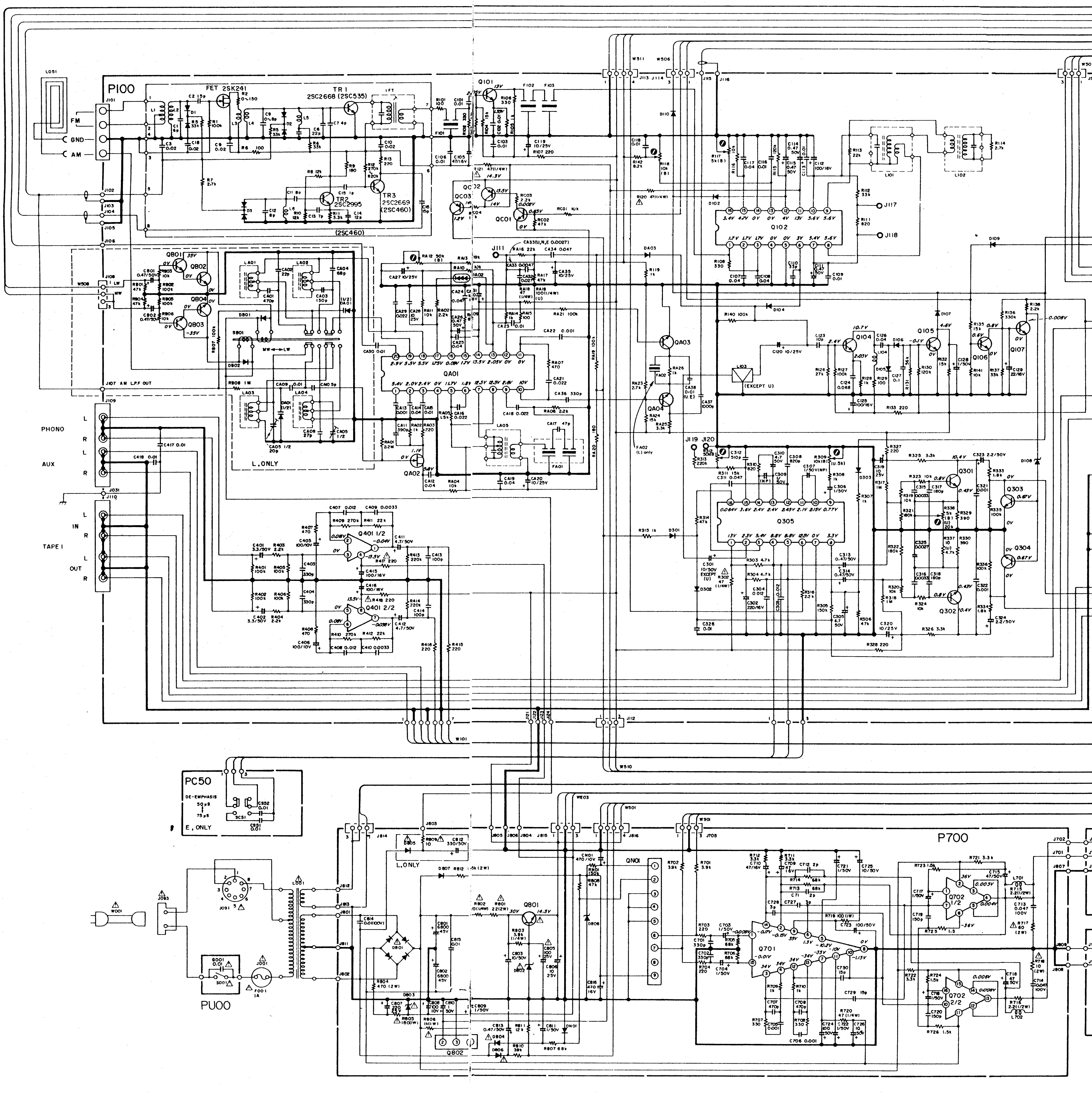
(E) VERSION



(P) VERSION

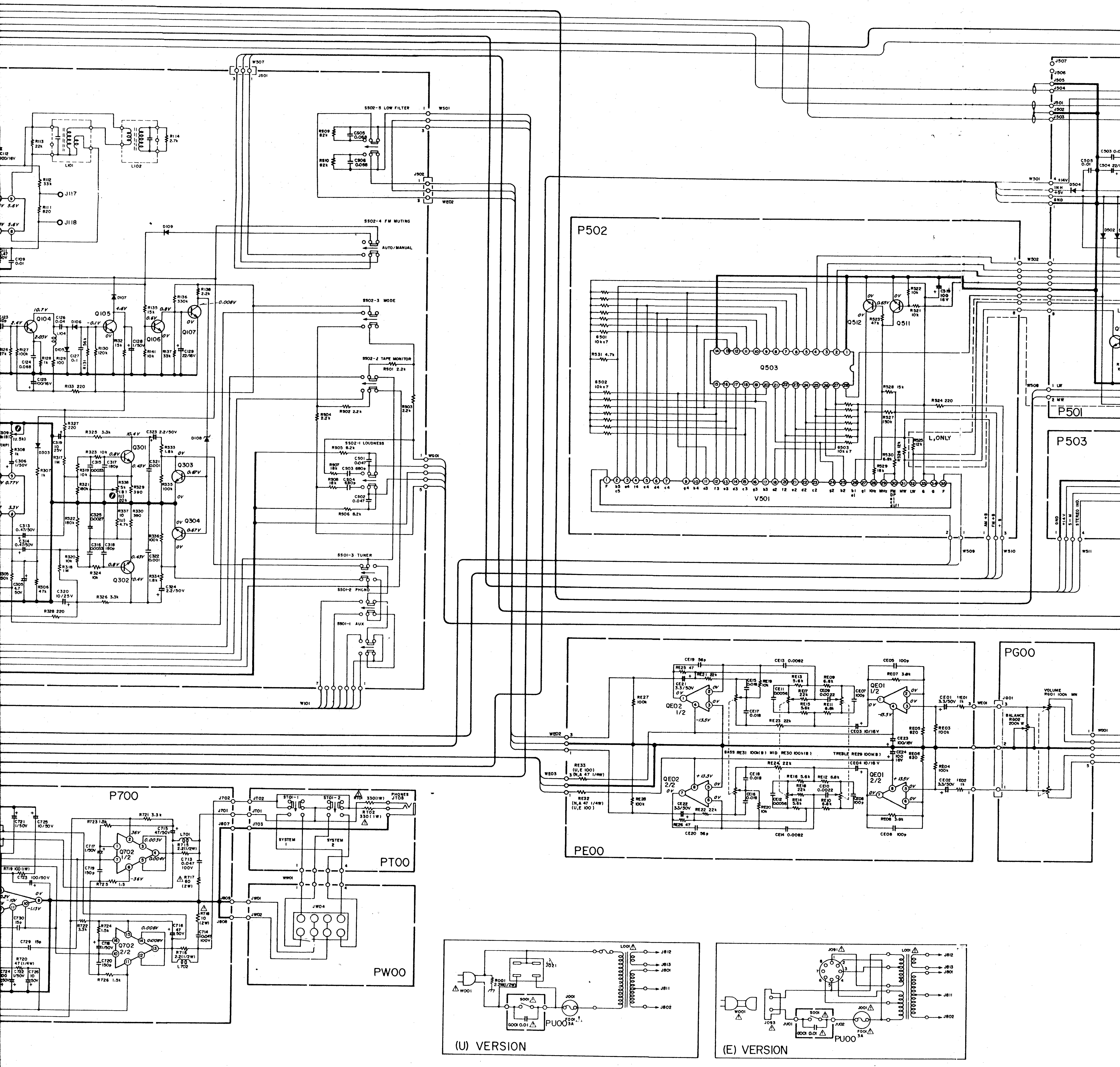


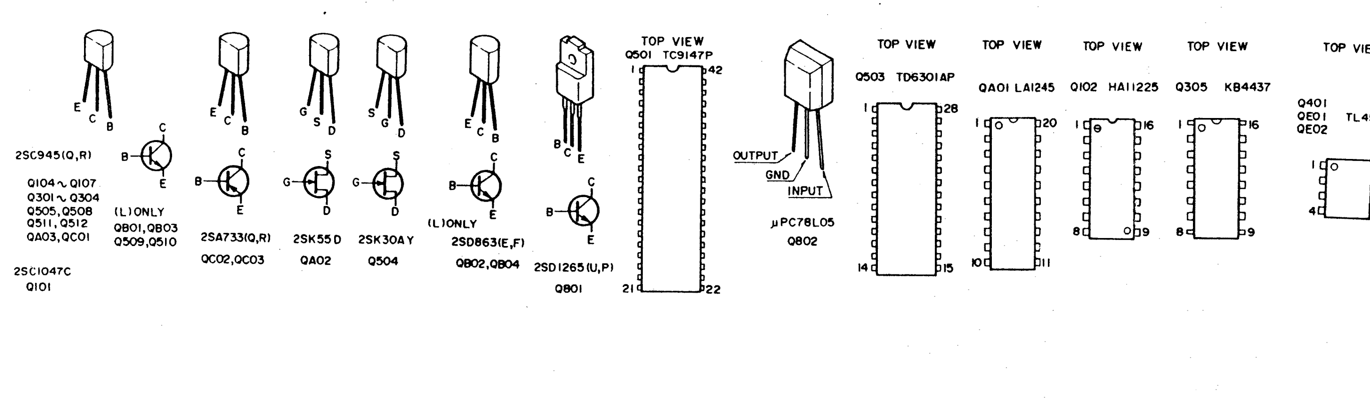
TOP VIEW
Q501 TC9147P
Q503 TD6301AP
QA01 LA1245
Q102 HA11225
Q305 KB4437
Q401 QE01 QE02 TL4558
SIDE VIEW
Q502 TD6104AP
Q701 STK3044
Q702 STK2240
Q513 LB1413
QN01 AN6136
Q003 NE5517N
Q001 NE5514N Q051
Q002 LM324N
2SK55D QA02
2SK30AY Q504
(L)ONLY
2SD863(E,F) QB02,QB04
2SD1265(U,P) Q801
μPC78L05 Q802
OUTPUT
GND
INPUT


P100
FM
GND
AM
FET 2SK241
TR1 2SC2668 (2SC535)
TR2 2SC2995
TR3 2SC2669 (2SC460)
Q101
Q102
QA01
QA02
QA03
QA04
Q104
Q105
Q106
Q107
Q305
Q301
Q302
Q303
Q304
Q401 1/2
Q401 2/2
Q801
Q802
Q701
Q702 1/2
Q702 2/2
QB01
QB02
QB03
QB04
QC01
QC02
QC03
PHONO
AUX
TAPE I
IN
OUT
L
R
J107 AM LPF OUT
L.ONLY
PC50
DE-EMPHASIS
E. ONLY
PU00
P700
QN01
W101
W510
W501
W901
W503
W506
W511
W508
NOTE ON SAFETY:

Symbol ⚠. Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

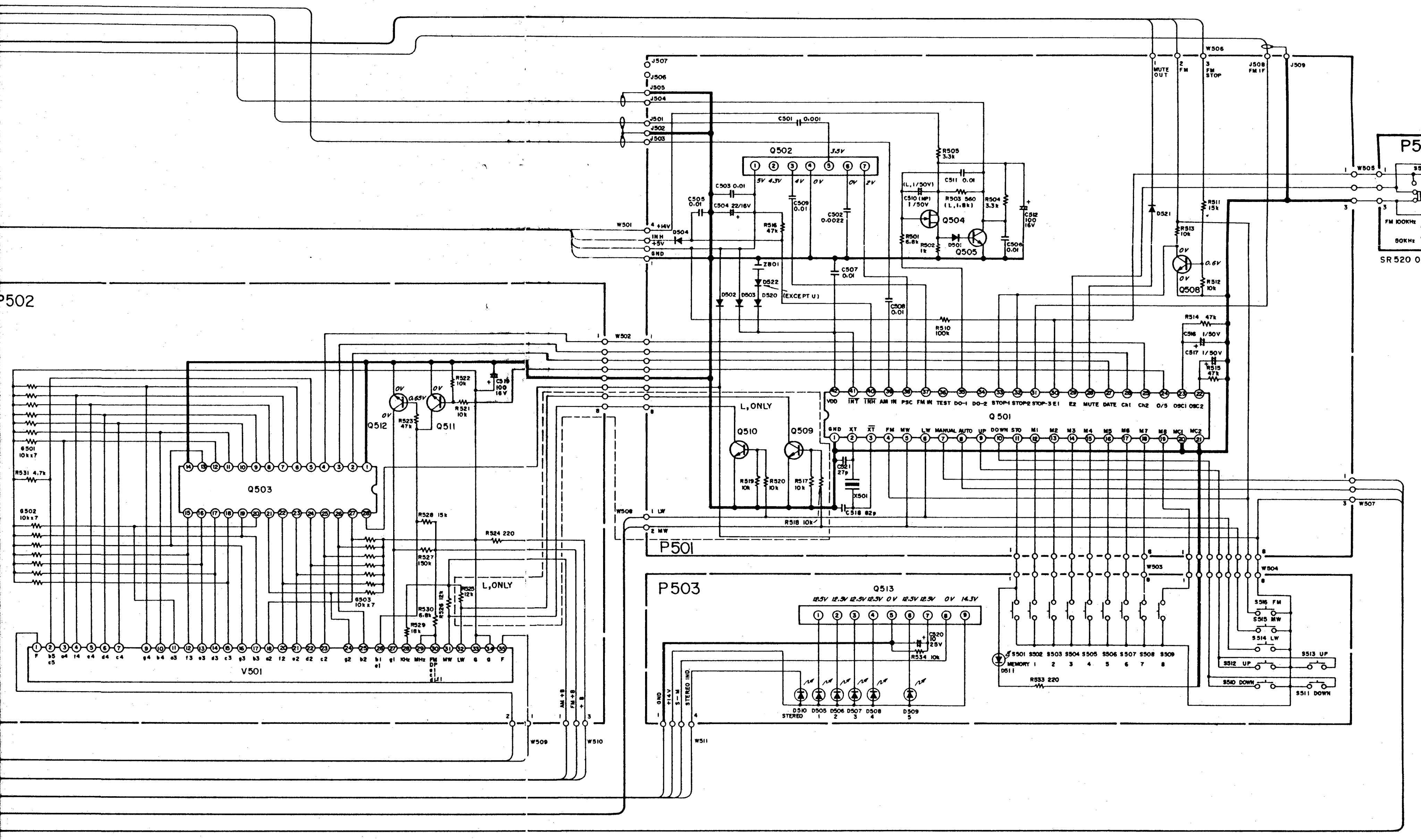
Components and wiring are subject to change for modification

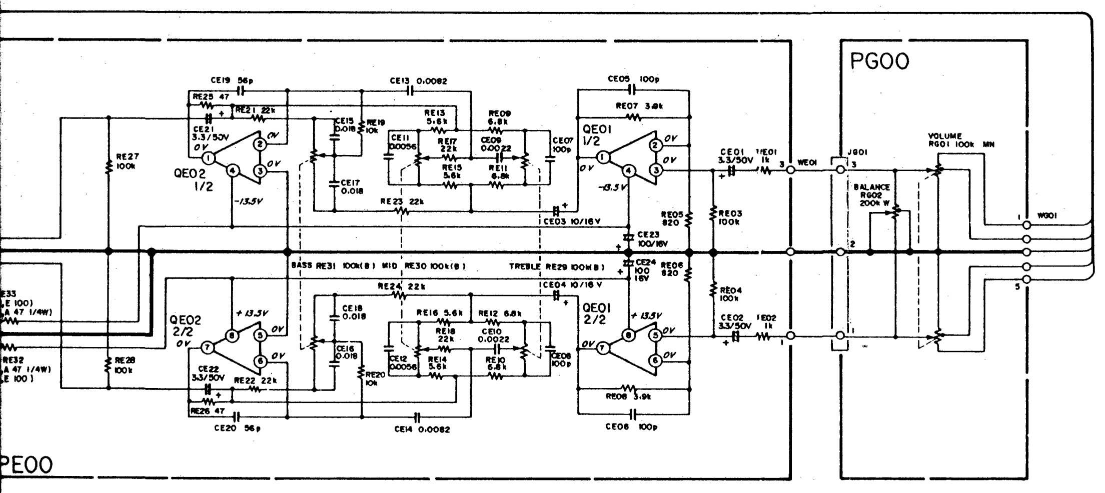

P502
P501
P503
P700
PT00
PW00
PE00
PG00
Q503
V501
S502-5 LOW FILTER
S502-4 FM MUTING
AUTO/MANUAL
S502-3 MODE
S502-2 TAPE MONITOR
S502-1 LOUDNESS
S501-3 TUNER
S501-2 PHONO
S501-1 AUX
L,ONLY
VOLUME
BALANCE
PHONES
SYSTEM 1
SYSTEM 2
(U) VERSION
(E) VERSION
PU00


2SC945(Q,R)
Q104~Q107
Q301~Q304
Q505,Q508
Q511,Q512
QA03,QC01
(L)ONLY
QB01,QB03
Q509,Q510
2SC1047C
Q101
2SA733(Q,R)
QC02,QC03
2SK55D
QA02
2SK30AY
Q504
(L)ONLY
2SD863(E,F)
Q802,Q804
2SD1265(U,P)
Q801
TOP VIEW
Q501 TC9147P
OUTPUT
GND
INPUT
μPC78L05
Q802
TOP VIEW
Q503 TD6301AP
TOP VIEW
QA01 LA1245
TOP VIEW
Q102 HA11225
TOP VIEW
Q305 KB4437
TOP VIEW
Q401
QE01
QE02

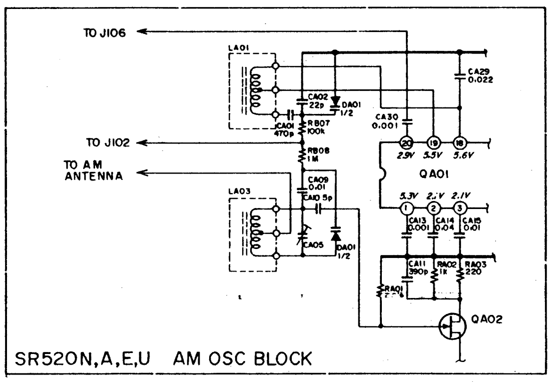
d wiring are subject to change for modification without notice.

# Model SR520/SR520L

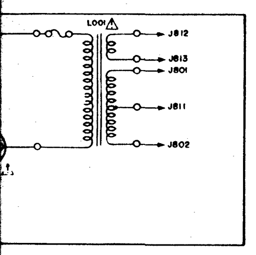

P502
P504
SR 520 ONLY
FM 100kHz
AM 10kHz
50kHz
9kHz
Q502
Q504
Q505
Q508
Q501
Q503
Q510
Q509
Q511
Q512
L,ONLY
L,ONLY
P501
P503
Q513
V501
(EXCEPT U)
STEREO
MEMORY
UP
DOWN
FM
MW
LW
X501
W301
W501
W502
W503
W504
W505
W506
W507
W508
W509
W510
W511

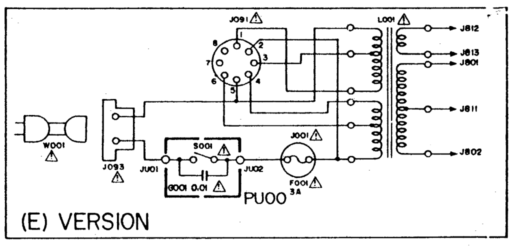

PG00
PE00
QE01 1/2
QE01 2/2
QE02 1/2
QE02 2/2
BASS
TREBLE
VOLUME
BALANCE
W901

| | | |
|---|---|---|
| Q101 | HT310471C1 | 2SC1047C |
| Q102 | HC10033010 | HA11225 |
| Q103 | HT309452A0 | 2SC945 Q,R |
| Q104~Q107 | HT309452A1 | 2SC945 Q,R |
| D102, D109<br>D104~D107 | HD20001211 | 1S2473 |
| D108<br>D110 | HD30029090 | WZ-090 |
| Q301~Q304 | HT309452A1 | 2SC945 Q,R |
| Q305 | HC10001420 | KB4437 |
| D301~D303 | HD20001211 | 1S2473 |
| Q501 | HC10070050 | TC9147P |
| Q502 | HC10072050 | TD6104AP |
| Q503 | HC10071050 | TD6301AP |
| Q504 | HF200301C0 | 2SK30AY |
| Q505, Q506 | HT309452A1 | 2SC945 Q,R |
| Q508 | HT309452A1 | 2SC945 Q,R |
| Q509~Q512 | HT309452A0 | 2SC945 Q,R |
| Q513 | HC10098030 | LB1413 |
| D501~D504 | HD20001211 | 1S2473 |
| D505~D507<br>D510~D519 | HI10030020 | LN224RP |
| D508, D509 | HI10031020 | LN324GP |
| D520~D522 | HD10002020 | 0A90 |
| Q701 | HC10087030 | STK-3042 II |
| Q702 | HC10097030 | STK-2250 |
| Q801 | HT412652A0 | 2SD1265 O,R |
| Q802 | HC10031060 | μPC78L05 |
| D801 | HD20008290 | S4VB |
| D802, D803 | HD30013010 | HZ-15-2L |
| D804~D807 | HD20010530 | DS-135D |
| QA01 | HC10058030 | LA1245 |
| QA02 | HF20055ID0 | 2SK55D |
| QA03 | HT309452A1 | 2SC945 Q,R |
| QA04 | HT308291C1 | 2SC829C |
| DA01 | HD40003420 | KV-1236Z3 |
| DA02 | HV00006120 | MV-203 |
| DA03, DA04 | HD20001211 | 1S2473 |
| QB01, QB03 | HT309452A0 | 2SC945 Q,R |
| QB02, QB04 | HT408632B0 | 2SD863E,F |
| DB01, DB02 | HD20015030 | DS-135D |
| QC01 | HT309452A0 | 2SC945 Q,R |
| QC02, QC03 | HT107332A0 | 2SA733Q,R |
| QF01, QF02 | HT406672F0 | 2SD667A C,R |
| QN01 | HC10008090 | NJM4558 |
| QN02<br>QN04~QN06 | HT309452A1 | 2SC945 Q,R |
| QN03 | HT107332A1 | 2SA733 Q,R |
| DN01, DN02<br>DN05 | HD20001211 | 1S2473 |
| DN03 | HD30033090 | WZ-052 |
| DN04 | HD30012010 | HZ-24-2L |

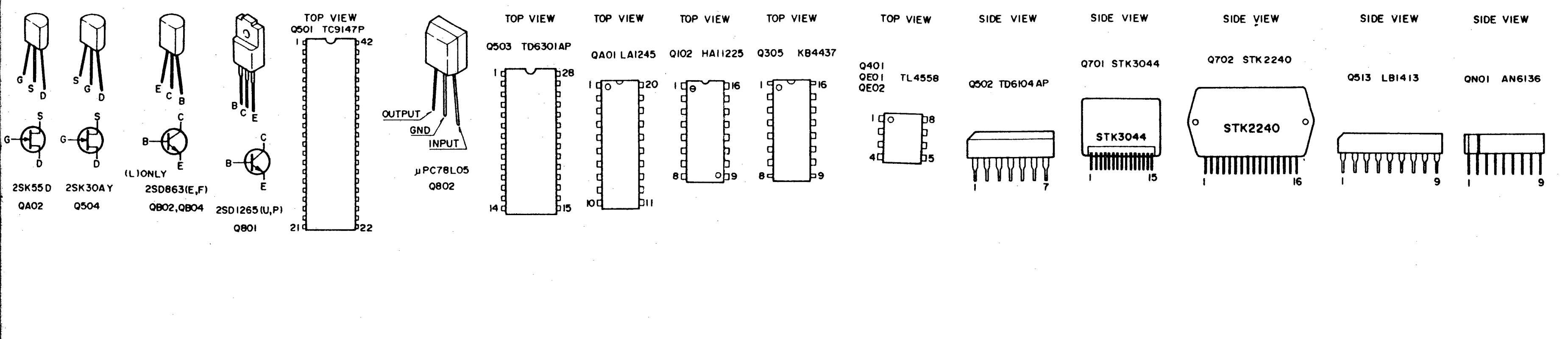

TO J106
TO J102
TO AM ANTENNA
LA01
LA03
QA01
QA02
DA01 1/2

SR520N,A,E,U AM OSC BLOCK


L001
J812
J813
J801
J811
J802


J091
W001
J093
J001
S001
J002
F001 3A
G001 0.01
PU00
J812
J813
J801
J811
J802

(E) VERSION


2SK55D
QA02
2SK30AY
Q504
(L)ONLY
2SD863(E,F)
QB02,QB04
2SD1265(U,P)
Q801
TOP VIEW
Q501 TC9147P
OUTPUT
GND
INPUT
μPC78L05
Q802
TOP VIEW
Q503 TD6301AP
TOP VIEW
QA01 LA1245
TOP VIEW
Q102 HA11225
TOP VIEW
Q305 KB4437
TOP VIEW
Q401
QE01
QE02
TL4558
SIDE VIEW
Q502 TD6104AP
SIDE VIEW
Q701 STK3044
STK3044
SIDE VIEW
Q702 STK2240
STK2240
SIDE VIEW
Q513 LB1413
SIDE VIEW
QN01 AN6136